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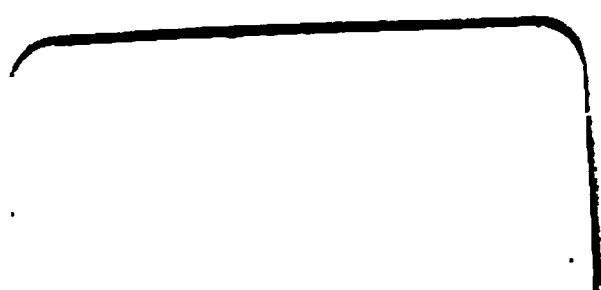
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THE
BRITISH
FLOWER GARDEN,
(Series the Second,)

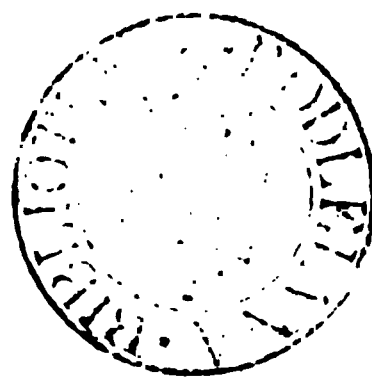
CONTAINING
COLOURED FIGURES & DESCRIPTIONS,
OF THE MOST
ORNAMENTAL & CURIOUS
HARDY FLOWERING PLANTS;

OR THOSE THAT ARE SOMEWHAT TENDER, BUT MAY STILL BE CULTIVATED
IN A WARM BORDER, NEEDING ONLY A MAT, OR A GARDEN POT,
PLACED OVER THEM IN SEVERE FROST;
SOME WILL EVEN REQUIRE BOTH EXPEDIENTS.

By ROBERT SWEET, F.L.S.

Author of Hortus Suburbanus Londinensis; Hortus Britannicus; Botanical Cultivator
Geraniaceæ; Cistincæ; Flora Australasica; the Florist's Guide;
the British Warblers, &c.

VOLUME III.



LONDON:
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AJAX cernuus.

Drooping creamy white Ajax.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Sect. V. NARCISSINÆ. *Radix bulbosa. Spatha monophylla. Flores umbellati, raro solitarii. Perianthium tubulosum petaloideum, 6-partitum, coronatum.*

AJAX. Spatha uniflora. Perianthium 6-partitum, patens: tubo turbinato; coronâ grandi poculiformi perianthii laciniis subæquantî. Genitalia recta. Filamenta libera, æqualia, ad basin tubi inserta, æqualiter, et ad ejus lacera paululum adnata, coronâ sæpe ter breviora. Antheræ lineares longæ. Ovarium triloculare, trivalve; valvis biseptiferis. Ovula numerosæ ovatæ, quadrifariam insertæ.—*Herbæ (Europæ) bulbosæ; bulbis tunicatis inferne rotundatis, superne conicis; foliis semper bifariis loratis grosse nervoso-striatulis plano-canaliculatis plus minus glaucis, ante anthesin fere semper erectis. Scapis semper unifloris.* *Haworth in Narcis. revis. in supp. pl. succ. p. 111. parum mutatum. Swt. hort. brit. edit. 2. p. 514.*

A. cernuus, foliis lorato-linearibus canaliculatus; subtus carinatis longitudinater striatis glaucescentibus, coronâ cylindræa crispâ 6-lobâ: lobis rotundis integerrimis, segmentis perianthii ovatis obliquis, flore cernuo.

Ajax cernuus. Haworth on the Narcissean group of plants in the philos. magaz. and annals, Aug. 1, 1830, p. 132; and in a Monograph on the Narcisseæ, by A. H. Haworth, in an appendix to the end of Vol. 1. of Sweet's British Flower Garden, series 2. p. 2. col. 2.

Narcissus cernuus. Roth catalect. bot. fasc. 1. p. 43. Neue Beytr. zur Botan. p. 187. Schult. syst. 7. pars 2. add. p. 1732. non Salisb. prodr.

Leaves lorately linear, scarcely acute, glaucescent, channelled on the upper side, hollowly keeled at the back, prominently striated with numerous longitudinal lines. *Scape* slender, erect, but bending round at the point, somewhat compressed, with 2 flat edges, striated with numerous lines. *Spathæ* ovate, rounded at the end, membranaceous, bursting on the upper side. *Ovarium* below the flower, oblong, green and glossy, 3-celled and 3-valved, 2 septums passing up the centre, and each bearing 2 rows of ovulæ. *Perianthium* deeply 6-parted, segments oblong-elliptic, acute, more or less twisted, longer than the tube. *Crown* about the length

of, or a little longer than the segments, tubular, deeply and regularly 6-lobed, the lobes rounded, entire, somewhat undulate or curled at the margin. *Stamens* 6, inserted in the base of the tube, nearly of equal length : *anthers* linear, all included in the crown. *Style* smooth, longer than the stamens, but also included within the crown. *Stigma* slightly 3-lobed, hollow on the upper side, pustulate.

The double variety differs solely from the single, by its crown being filled with petals, and its stronger and more robust scape. For the opportunity of giving the present figure of this beautiful species of Ajax, we are obliged in part to Mr. Thomas Milne, of the Fulham Nursery, for the single variety, and in part to the Reverend Mr. Ellicombe, Vicar of Bitton, the possessor of a fine collection of Narcissi, and of hardy herbaceous plants ; and of whose liberality we feel highly sensible.

The present beautiful plant has been confused ever since Roth published it, with *A. moschatus*, by all Botanists, until Mr. Haworth obtained it from Mr. Ellicombe, of Bitton ; and on comparing it with Roth's Beitrage, he immediately recognised it as the same as his *cernuus* ; it is certainly the most distinct and handsome species of the whole genus, and is nearest related to *N. moschatus* and *N. tortuosus*, particularly the latter, with which it agrees precisely in colour.

Ajax is a poetical name ; he was a warrior in the siege of Troy, of gigantic size and strength, and the most valiant Greek, next to Achilles.



1. The flower spread open to show the insertion of the Stamens, and the beautiful 6-lobed crown. 2. Ovarium, terminated by the Style and bluntly 3-lobed Stigma. 3. Single flower. 4. Double.

TULIPA Oculus solis.

Sun's-eye Tulip.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. TULIPACEÆ. *Kth. synops.* 1. p. 292.

TULIPA. *Perianthium* 6-phyllum, petaloidum, campanulatum: foliola erecta aut subpatentia non nectarifera. *Stamina* 6, basi foliorum inserta. *Antheræ* posticæ. *Stylus* 0. *Stigma* sessile, trilobum, cristatum, aut subcapitatum papillosum. *Capula* oblonga, obtuse trigona. *Semina* numerosa, plana.—*Folia* vaginantia, radicalia et caulina. *Scapus* 1 vel rarius 2-3-florus, erectus aut subnutans, rarissime aphyllus.

T. Oculus solis, caule unifloro glabro foliis subæquali, flore erecto, perianthii laciniis oblongo-lanceolatis subæqualibus patentibus apice subpubescentibus, maculâ baseos elongatâ angustâ, foliis lanceolatis longe acuminatis.

Tulipa Ocula solis. *St. Amand Soc. d'Agr. d'Agen.* 1. p. 75. *Lam. et DC. flor. franc.* 3. p. 300. n. 1906. *Schrad. n. journ.* 4. p. 88. *Loisel. flor. gall.* 1. p. 189. (exl. pl. e Gallo prov. vid. spec.) *Schult. syst.* 7. p. 377. *Reboul Tulip.* p. 3. n. 3. *Redout. liliac.* t. 219. *Trattin. tabular.* 55. non *Bot. Reg.*

Tulipa pyrizana. *Merian. Surinam,* t. 5. f. 14.

Bulb large, rounded at the base, and tapering upwards, clothed with a loose ragged brown skin, the bulb itself slightly pubescent. *Scape* erect, leafy, smooth and cylindrical, about a foot in height, of a shining pale yellowish green. *Leaves* densely pubescent, and fringed with short hairs, about 10 inches long, sheathing the stem at the base, about the length of the scape, and from 4 lines to an inch and a half in breadth; lanceolate, tapering to a long slender point, very glaucous, hollow on the upper side, prominently and longitudinally striate at the back. *Flowers* red, or striped with red and yellow, with a dark circle at the base. *Perianthium* of 6 petal-like leaflets, nearly equal in size, and spreading widely open when expanded, connected into one at the base, in which part the stamens are inserted: *leaflets* elliptically lanceolate, abruptly acuminate, elegantly striate, imbricate downwards, but distinct at the points, which are

tipped with a very small bunch of wool. *Stamens* 6, inserted in the base of the perianthium, every other one longer than the others: *filaments* broad at the base, more or less hollow in front, and convex at the back, tapering upwards to a sharp point, which is inserted into the base of the anther. *Ovarium* reaching to the anthers, smooth, acutely triangular. *Stigma* sessile, 3-lobed, the lobes short, scarcely reflexed at the ends, somewhat pustulose.

We are glad now to have the opportunity of presenting our readers with the true *Tulipa Oculus Solis*, which has never been before published in any modern English publication; the three figured in the Botanical Register all belong to *T. præcor*, of Tenore, which is the one already figured in our Flower Garden, which we received from Tenore himself; the variety given by Mr. Lindley in the last Number of the Botanical Register, 1419, is precisely the same figured in that work in a former Number, vol. 3, t. 304, and both are precisely the same as ours, figured in the first series of our Flower Garden, t. 157, so that the true *Oculus Solis* has not been figured in the Register at all; the Persian *Oculus Solis*, with its gigantic flower, and hairy, instead of woolly bulb, is, without doubt, a very distinct species.

Our drawing of this beautiful species of Tulip was taken from a bulb given us by our friend, Mr. W. Anderson, Curator of the Botanic Garden at Chelsea; he received that, and several other Italian species, from the Apothecaries' Company, who had imported them from Italy as Colchicum roots; there are several beautiful species amongst them, but we were rather too late in examining them this season, having let *T. strangulata* go by of Reboul, without observing it; but we have another species, the *T. Bonarota* of Reboul, which, with its two beautiful varieties, will be figured in an early Number; that, instead of having a black mark at its base, like *T. Oculus Solis*, or Sun's-eye Tulip, has a bright azure blue one, and is a most beautiful plant. *T. strangulata* is the worst of the three, but is nevertheless a most beautiful and elegant plant.

For the derivation of the generic name, see p. 97, of the present series.



1. The real species. 2. A beautiful variety of it. 3. Bulb. 4. Stamen. 5. The 3-sided Ovarium, terminated by its large 3-lobed crested Stigma.



R. Scutellari

Pub. by J. Rodger, July 1831

W. H. H. H.

AQUILEGIA Garnieriana.*Miss Garnier's Columbine.**Linnean Class and Order.* POLYANDRIA PENTAGYNIA.*Natural Order.* RANUNCULACEÆ. *DC. reg. veg. syst.* 1. p. 127.*Tribus* IV. HELLEBOREÆ. *Æstivatio calycis et corollæ imbricata.**Petala* nunc 0, nunc irregularia bilabiata nectarifera. *Calyx* petaloideus. *Carpella* capsularia intus dehiscentia polysperma. *DC. prodr.* 1. p. 44.*AQUILEGIA.* *Supra folio* 55, *series* 2.

- A. Garnieriana*, calcaribus apice involutis petalis multo longioribus apice nodosis, capsulis intus pilosis, caule paniculato-ramoso tenuiter piloso, sepalis rotundo-ovatis obtusis subemarginatis, foliis caulinis inferioribus ternatis: foliolis tripartitis cuneato-trilobis obtuse dentatis: superioribus tripartitis; segmentis lobatis integerrimis apice emarginatis, bracteis oblongis obtusis.

Perennial. *Root-leaves* ternate: leaflets petiolate, deeply 3-parted, broadly wedge-shaped, or dilated at the ends, more or less lobed, those on the lower part of the stem ternate, the leaflets deeply divided into 3 segments, which are very broad, and lobed with wedge-shaped lobes, more or less toothed, and terminated with a little notch at the ends, underneath much veined with branching veins, and bearing a sort of farinaceous powder: *upper leaves* ternate or deeply 3-parted, the leaflets oblong with a notch at the ends, some notched a little towards the end, others entire. *Petioles* on the stem-leaves dilated at the base, and hollow on the upper side, occasioned by the membranaceous edges which bend upwards, and surround the stem a little at the base; the upper part, as well as those on the leaflets, thinly covered with spreading hairs. *Stem* erect, somewhat flexuose, slightly but sharply angled, striate, thinly covered with spreading hairs below, but increasing in number upwards, where they become shorter and more numerous, more or less tinged with purple. *Bractes* oblong, 2 or 3-leaved, or entire, obtuse, edged with purple, and veined. *Flowers* in a sort of loose panicle, nodding. *Peduncles* slightly angular, very hairy, also more or less tinged with purple. *Sepals* very broadly ovate, slightly emarginate at the point, tapering to the base, alternate with the petals, hairy on the outside, of a bright

blue purple, glossy on the inside, tipped with pale yellowish green, every alternate one less than the other. *Petals* 5, lengthened down into a long spur at the base, which is involute, and terminated in a glossy knob at the end: *spur* hairy, of the same colour as the sepals: *limb* 2-lipped, the inner lip almost obsolete, terminated in a sort of hollow callosity, outer lip erect, contracted and hollow at the base, where it is of a blue purple, spreading upwards so as to be of a spathulate form: of a bright straw-colour, thinly hairy on the outside. *Stamens* numerous, surrounding the carpellas, unequal in length: *filaments* smooth, connected in sets at the base: inner ones membranaceous, flat, surrounding the carpella, linear, two-ribbed outside, lacerate at the ends: *anthers* 2-lobed, opening at the side, for the exclusion of the pollen, and united by their base to the filaments: *pollen* yellow. *Carpellas* 5, smooth at the back, but clothed with long hairs in front. *Styles* smooth. *Stigma* a small blunt termination.

For this beautiful and splendid hybrid production of *Aquilegia*, we are obliged to Miss Garnier, of Wickham, Hants, in whose collection it was raised from seeds; the seeds were produced from *A. sibirica*, figured at t. 40. of the new series of our Flower Garden; it was impregnated with the pollen of *A. vulgaris*; it is quite hardy, succeeds well in the open borders of the Flower Garden, and nearly equals *A. sibirica* in beauty; our specimen of *A. sibirica* was a monster, as we supposed, when publishing it, we having been obliged by a large plant sent to us by the favour and kindness of Miss Garnier.

For the meaning of *Aquilegia*, see supra, folio 40.

Our drawing was made from a fine specimen received from Messrs. Whitley, Brames, and Milne, two years ago; but as the flowers at that time had all dropt their bractes, we were glad to see it in flower again, about a fortnight since, against a wall in the Horticultural Society's Garden, at Chiswick, by the side of its beautiful congener, *W. chinensis*. Mr. Munro was kind enough to give us a fine specimen of it, as soon as we asked him; and we have now free admittance to the Horticultural Society's Garden, and leave to figure what plants we like, which we were denied at the time that Mr. Sabine was Secretary.



1. One of the Sepals. 2. One of the Petals, with a large knob at the end of the Spur. 3. Stamens. 4. The 5 barren Stamens connected. 5. The 5 Carpella, terminated by the long slender Styles and minute Stigmas.

WISTERIA frutescens.*American Wisteria.**Natural Order.* LEGUMINOSÆ. *DC. prodr.* 2. p. 93.Subordo I. PAPILIONACEÆ.—Tribus V. PHASBOLEÆ. *Supra fol.* 211.*WISTERIA.* *Supra fol.* 211.*W. frutescens*, alis biauriculatis, ovario glabro. *DC. prodr.* 2. p. 300.*Wisteria frutescens.* *DC. legum. mem.* IX. p. 371.*Wisteria speciosa.* *Nutt. gen. amer.* 2. p. 116. *Spreng. syst.* 3. p. 255. *Swt. hort. brit.* p. 121.*Thyrsanthus frutescens.* *Ell. journ. ac. sc. phil.* 1818. 1. n. 13. p. 371.*Apios frutescens.* *Pursh fl. amer. sept.* 2. p. 474. *Swt. hort. sub. lond.* p. 103.*Glycine frutescens.* *Linn. spec.* 1067. *Willden. sp. pl.* 3. p. 1067. *Hort.**Kew. ed.* 2. v. 4. p. 298. *Botan. magaz.* 2108.*Phaseoloides frutescens caroliniana*, foliis pinnatis, floribus cæruleis conglomeratis. *Hort. angl.* 55. t. 15.

Stem shrubby, climbing to a great height, young branches pubescent. *Leaves* pinnate, pubescent; the leaflets ovate, acute, petiolate, 4 or 5 pair; and terminated by an odd one, the footstalks short and fleshy, downy. *Petioles* downy, channelled on the upper side, and rounded on the lower, swollen at the base, and producing two slender stipule-like glands at the base of each pair of leaflets. *Flowers* of a palish blue, in a close terminal raceme. *Bractes* large, acute, pubescent, purple, imbricate, and enclosing the flowers before expansion, but dropping off as the flowers expand, and leaving them naked. *Pedicles* short and stout, spreading, pubescent, or thickly clothed with short hairs. *Calyx* campanulate, blunt at the base, 2-lipped, purple, thickly clothed with short hairs; upper lip short, nearly truncate, toothed with two very small teeth: lower lip trifid, the laciniae erect, broadly lanceolate, acute. *Verrillum* broadly rounded, lined with innumerable faint lines, eared on each side, blue, with a greenish yellow spot at the base, above the unguis, encircled with white; unguis rigid, lined with a rigid plate, which terminates in a sort of flat point on each side, at the

summit, where it is partially separate. *Wings* joined into one at the point, but distinct below, where each is terminated by a long subulate ear on one side, nearly as long as the unguis; not two ears on each, as we believe was meant by Decandolle, and would appear to be the case by Nuttall's description; though we believe he meant one on each, considering the two wings when joined as one. *Keel* similar to the wings, but shorter, and joined lower down, acutely keeled, the ears shorter and broader. *Stamens* 10, diadelphous. *Ovarium* smooth and glossy, several seeded. *Style* smooth, ascending. *Stigma* a small head.

This beautiful climbing plant is the original species of *Wisteria* of Nuttall, who named it "in memory of Caspar Wistar, M.D. late Professor of Anatomy in the University of Pennsylvania, and for many years President of the American Philosophical Society; a Philanthropist of simple manners and modest pretensions, but an active promoter of science."

A twining shrub, with pinnated leaves, flowers racemed, 1-bracted, bractes very large, and extending long beyond the flowers, imbricately enveloping the flower-buds, coloured and deciduous, all dropped off from the lower part of the raceme, while the upper part is as thickly clothed with them; legume long and coriaceous; seeds large. The greater part of the above is copied from Nuttall.

This beautiful plant, though but little cultivated, is far superior in beauty to *W. chinensis*, and is the more desirable, as it is in full beauty when the other has done flowering: it is also a very free bloomer, and strikes readily by young cuttings, planted under a hand-glass, but the glass must have air given it, or they will damp off; it must be on a little heat.



1. Calyx. 2. Vexillum. 3. The 2 Wings. 4. Keel. 5. The 10 Stamens; 9 connected nearly their whole length, the 10th distinct. 6. Pod terminated by the long slender Style, and minute Stigma.

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2



222. *U. agrostis* Aug 1881

Walden

ÆNOTHERA anisóloba.*Unequal-lobed Evening Primrose.**Linnean Class and Order.* OCTANDRIA MONOGYNIA.*Natural Order.* ONAGRARIÆ. DC. *prodr.* 3. p. 35.*Tribus* III. ONAGRÆÆ. Fructus capsularis, loculis polyspermis, seminibus non alatis. Calycis tubus ultrà ovarium productus. Stamina petalorum numero dupla.—*Herbæ interdum basi suffruticulosæ.**ÆNOTHERA.* Supra folio 19, series 2.*Sect.* III. *ÆNOTHERIUM.* Stigma quadrifidum, antheræ oblongæ, fructus obovalo-clavatus sæpè octocostatus, valvis obovatis. DC. *loc. cit.*

Æ. anisóloba, caule suffruticoso elato striato ramoso pubescenti-hirsuto, foliis radicalibus ellipticis integris paucidentatis: mediis ellipticis argute dentatis, basi laciniis variabilis linearibus acutis divaricatis; superioribus inæqualiter pinnatifidis, segmentis divaricatis terminali maxima, ovarium tetragonum, tubo corollæ longissimo, petalis maximis imbricatis margine crenulatis vesperi expansis odoratissimis.

Root fusiform, fleshy. *Stem* erect, frutescent, appearing likely to attain a considerable height; green, or frequently red at the joints, thickly clothed with pubescence mixed with long hairs. *Leaves* hairy on both sides, on long slender footstalks; lower ones elliptically obovate, scarcely toothed, the next set terminates in a long broad elliptic lobe, which is sharply toothed, bearing numerous unequal linear sharp lobes on the lower part, some divaricately spreading, others hooked: upper ones unequally pinnatifid, large and small lobes mixed, some of which are lanceolate, spreading, and toothed, others more or less hooked or incurved, and others shorter, smaller, linear and sharp-pointed, the footstalk winged all the way between the leaflets, hairy on both sides, furrowed on the upper side, and rounded below. *Ovarium* tetragonal, pubescent, 4-winged; wings spreading, fleshy, terminating in a blunt end in the centre. *Flower* large, white, spreading widely open: *tube* about 4 inches and a

half in length, quadrangular, pubescent. *Calyx* of 4 sepals, generally connected by pairs towards the points. *Petals* 4, very broad, closely imbricate, spreading flat when expanded, rounded, and crenulate at the edges. *Stamens* 8; *anthers* narrowly linear, attached by their back to the filaments; *pollen* yellow, stringy: *filaments* inserted in the mouth of the calyx. *Style* inserted on the ovarium, extending beyond the flower, smooth. *Stigma* 4-cleft, the lobes long; spreading, cylindrical.

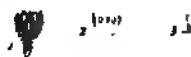
This plant is a great acquisition to showy border flowers, it being, in our opinion, one of the most elegant of the species of *Ænothera*; and it will no doubt turn out to be perfectly hardy, at least equally so with the *Argemone grandiflora*; but should it be found not to stand our climate in the open border as a perennial, it will, at least, form a showy border annual, as it flowers very early, the first year, from seed. The seed, if sown early in Spring, on a hot-bed, and if the plants are planted out in the open border in April, they will flower in June. It is a native of Chiloe, from whence seeds were sent to Mr. Page, along with bulbs of *Habranthus roseus*, No. 107 of the present Number, by Lieutenant Barlow, in 1828.

The species appears to be intermediate between *Ænothera taraxacifolia*, and *Æ. acaulis*; from which it differs in its more upright habit, and in the leaves being more unequally lobed.

The generic name is said to be derived from οἶνος, wine, and ἔνγω, to hunt; because the roots of *Ænothera biennis* are said to be eaten after meals, and are incentives to wine drinking, as olives are.



1. Calyx, shewing the insertion of the Stamens. 2. Style, and 4-lobed Stigma.



ANDROSACE carinata.*Keel-leaved Androsace.**Linnean Class and Order.* PENTANDRIA MONOGYNIA.*Natural Order.* PRIMULACEÆ. *Brown prodr.* 1. p. 427.

ANDROSACE. *Calyx* 5-fidus persistens. *Corolla* hypocrateriformis 5-loba, fance coarctatâ glandulosâ. *Stamina* 5. *Stigma* 1. *Capsula* 1-locularis, ovato-globosa, 5-fariam dehiscens; polysperma.—*Plantæ* caespitose, dense foliosæ. *Flores* umbellati; *scapi* numerosi.

A. carinata, foliis congestis ovato-lanceolatis acutis supra carinatis ciliatis, scapo villosa, umbellis plurifloris, calycibus obtusis corolla brevioribus. *Androsace carinata.* *Torrey in the Ann. of the Lyc. of New York.* 1. t. 3. f. 1. *Spreng. syst.* v. 4. pars. 2. cur. post. p. 57. *Swt. hort. brit. ed. 2. add. p.* 595.

Plant densely tufted: stems red when in flower, an inch and a half in height, including the flower-stem. *Leaves* crowded, ovately-lanceolate, acute, keeled on the upper side, fringed at the margins, smooth on both sides, of a glossy green on the upper side, and sometimes tinged with purple underneath. *Scape* three-fourths of an inch in height, thickly clothed with villous hairs. *Umbels* in our plant generally 6-flowered. *Involucre* of 5 or 6 leaflets, which are oblongly ovate, obtuse, villosely hairy, concave on the inner side. *Pedicles* short, villous, bracteate at the base. *Flowers* white, yellow at the mouth, very sweet-scented. *Calyx* 5-cleft, nearly to the base, persistent: *segments* oblongly ovate, bluntish, hollow above, villosely hairy. *Corolla* funnel-formed: *tube* ovate, contracted at the mouth: *limb* spreading, flat, the segments ovate, rounded at the ends, distinct, not imbricate, white nearly to the base, which is yellow. *Stamens* 5, inserted in the tube. *Ovarium* broadly top-shaped, flattened at the top, of a smooth glossy green, *Style* smooth, included in the tube. *Stigma* a small head.

This elegant little plant is a native of North America, on the rocky mountains, where it was first discovered by Dr. James, and since by Mr. Drummond, who collected seeds of it, a part of which was presented by him to the Royal Botanical Garden at Edinburgh, in 1828, under the name of *Androsace chamæjasme*, from whence the plant from which our drawing was taken was brought by Mr. George Don, from Mr. M'Nab, to Mr. Anderson, of the Apothecaries' Garden, Chelsea, with whom it flowered in April last. The plant certainly very much resembles the European species *Androsace chamæjasme*, and *A. villosa*, but is distinguished from these especially in the flowers being almost sessile upon the top of the peduncle, while in them the pedicles are longer than the involucre; the leaves, too, seem longer in the present plant, and lanceolate rather than ovate. Its culture is the same as that for other Alpine plants, to be grown in small pots, well drained with sherds, in a mixture of peat and sand, and placed in a cold frame during Winter; and it is easily increased by dividing the plant at the root in Spring, or by sowing the seeds, which sometimes ripen.

The generic name is derived from *ανηρ ανδρως*, a man, and *σας*, a buckler; the large round hollowed leaf of *Androsace maxima* has been compared to the buckler of the ancients.



1. Calyx. 2. Tube of the Corolla spread open, to show the insertion of the Stamens.
3. Ovarium crowned by the filiform Style and minute capitate Stigma.



R. D. Smith del.

Salp. Hodgson Aug 1831

W. C. C. n

HABRANTHUS roseus.

Rose-coloured Habranthus.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. Brown prodr. 1. p. 296.

Subordo III. HIPPEASTRÆ. Scapus cavus. Tubi faux arcta. Semina testa nigra. W. Herbert Bot. mag. vol. 52. 2606. p. III.

HABRANTHUS. Perianthium declinatum, infundibuliforme, sub sole patentior. Filamenta pariter ad faucem tubi inserta, declinata, recurvata, fasciculata: quaternâ longitudinis discrepantiâ. Antheræ incumbentes. Stigma trifidum. W. Herbert Bot. mag. loc. cit.

H. roseus, foliis anguste linearibus glaucis obtusiusculis supra canaliculatis pedem longis 2 lineas latis scapo longior, scapo subcompresso profunde sulcato, spatha uniflora apice longe attenuata pedunculo longitudine, pedunculi profunde sulcati, perianthium campanulatum patente.

Bulb ovate, subpyramidal, clothed with a dark brown membranaceous scaly covering, which sheaths the leaves, nearly an inch above the bulb. *Leaves* 3, in our specimen, elongately and narrowly linear, bluntish at the point, glaucous, deeply channelled on the upper side, about a foot in length, and 2 lines broad. *Scape* erect, somewhat compressed, deeply furrowed, 7 inches in height in our plant, which was probably owing to its having been flowered in the greenhouse; and there is no doubt but it is quite hardy. *Spathe* very narrow, and tapering to a long slender point, about the length of the peduncle, 1-flowered. *Peduncle* deeply furrowed. *Ovarium* below the flower, 3-celled, 3-valved, apparently few-seeded. *Flower* campanulate, spreading, of a beautiful rose-colour, slightly striped with darker lines; upper segment narrow, acute, the 2 upper side ones broader, and the 3 lower ones again narrower. *Stamens* 6, of various lengths, inserted in the mouth of the tube, 2 very long, and ascending at the points, 2 a little shorter, also ascending,

and 2 still shorter, but each pair nearly of equal lengths. *Anthers* 2-celled, attached by their middle to the filaments: *pollen* granular, of a golden yellow.

An elegant plant, native of Chiloe, whence bulbs were sent by Lieutenant Barlow to Mr. Page, Nurseryman, Southampton, in whose garden the plant from which our figure was taken, flowered last June. It will no doubt thrive well in a warm border, in the front of a stove, greenhouse, or wall; the bulbs to be covered with litter during Winter, to protect them from the frost. The plant can only be increased by offsets.

The name is derived from *ἀβρος*, delicate, and *ανθος*, a flower; the flowers of all the species being delicate.



1. The 6 unequal ascending Stamens. 2. Style crowned by the 3-lobed Stigma.



ADENÓPHORA stylòsa.

Long-styled Adenophora.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. Alph. DC. monog. Campan.

ADENOPHORA. Calyx 5-fidus. Corolla campanulata vel infundibuliformis, apice 5-loba. Stamina inter se libera; filamentis erectis, membranaceis, longis, valdè ciliatis, conniventibus et quasi coherentibus. Nectarium cylindricum styli basi cingens. Stylus sæpè exsertus, in alabastro supernè pilosus; pilis in 10 ordines dispositis, deindè glaber. Stigmata 3. Capsula 3-locularis, lateraliter ad basin 3-valvis dehiscens. Semina ovata, plus minùsve complanata.—Herbæ perennes, vel rarius biennes? radicibus sæpè edulibus (ex Fisch.); caulibus erectis; foliis alternis vel rarius subverticillatis; radicalibus petiolatis rotundatis; caulinis sæpiùs sessilibus; superioribus angustioribus, brevioribus: floribus racemosis vel paniculatis, terminalibus et axillaribus, pedicellatis, nutantibus; alabastris clavatis. Alph. DC. mon. camp.

A. stylosa, foliis alternis petiolatis: inferioribus obovatis sinuatis; superioribus ovato-acuminatis subcordatis, serratis, floribus paucis racemosis, lobis calycinis triangularibus erectis integris, corollâ infundibuliformi, stylo sæpiùs exserto. Alph. DC. mon. camp. p. 360.

Adenophora stylosa. Fisch. Adumbr. p. 6.

Campanula stylosa. Lam. dict. 1. p. 580. illustr. 2510. Schult. syst. 5. p. 110.

Campanula foliis ex cordato-lanceolatis, &c. Gmel. sib. 3. p. 152. t. 27.

Perennial, producing several stems from the same root, attaining, when the plant is strong, the height of 3 feet; the upper part paniculately branched, forming a panicle of numerous flowers a foot in length: *branches* angular, striate, slender, but rigid, smooth, and glossy. *Leaves* variable, smooth, serrate, of a pale green: *root ones* on long petioles, cordate; those on the lower part of the stem sessile, or nearly so, elliptic, or elliptically lanceolate, tapering to the base, more or less acuminate, serrated with large rather distant teeth, pennately or feather-nerved underneath, the nerves branched: *upper leaves* lanceolate, acute, serrated with small

sharp teeth. *Flowers* of a pale blue, small, campanulate, scarcely half the size of those of *A. liliifolia*, drooping. *Bractes* small, broad at the base, tapering to the point. *Peduncles* short and slender, furrowed, smooth, and glossy. *Calyx* superior, deeply 5-cleft, smooth; the segments broadly lanceolate, acute, spreading, the points slightly reflexed. *Corolla* campanulate, narrow at the base and widening upwards, of a pale blue, slightly 5-cleft; *segments* short, ovate, scarcely acute, erect, or somewhat reflexed. *Stamens* 5; *filaments* dilated at the base, where they are densely clothed with glandular hairs, the upper part smooth and slender, inserted into the base of the anthers, which are oblong and 2-celled, bursting before the flowers are expanded. *Crown* white, truncate, cup-shaped, smooth, and glossy, surrounding the base of the style. *Ovarium* below the calyx, angular, smooth, and glossy. *Style* very long, about twice the length of the flower, smooth, and slender at the base, thickening upwards, and clavate at the end, densely covered with glandular hairs. *Stigma* trifid, the points slightly reflexed.

The present species is a native of Siberia, and appears to have been cultivated in the Paris Garden, about 1782, under the name of *Campanula liliifolia*; from which it differs, by its ascending stem, by the leaves being nearly all stalked, and almost cordate, by the flower-bud being oval and very blunt, with entire lobes, by the funnel-shaped corolla, by the larger nectary, and, finally, by the style being less exserted. The plant does not appear to have been cultivated in the English Gardens, until 1818, or 1819; it is of easy culture, only requiring to be planted in the open border, in any kind of soil; and it is easily propagated by dividing the plant at the root in Spring, or by seeds, which ripen in abundance.

The generic name is derived from *αδην*, a gland, and *φέρω*, to bear; in allusion to the stigma being clothed with glandular hairs.



1. Calyx. 2. Stamens, shewing their dilated base. 3. Ovary, Style, and Stigma.



Androsace

Pub. by J. R. R. & J. R. 1832

Waddell & Co.

RIBES sanguineum.*Red-flowered Currant.**Linnean Class and Order.* PENTANDRIA MONOGYNIA.*Natural Order.* GROSSULARIÆ. *DC. fl. fr.* (1804) 4. p. 406.

RIBES. Calyx 5-lobus, laciniis plus minus coloratis. Petala 5 parva albida lutea vel rubra. Stamina 5 rarissime 6: filamentis liberis. Stylis 1-2-3-4-fidi. Bacca unilocularis, receptaculis lateralibus. Semina arillata (sa in omnibus?) oblonga subcompressa. *DC. prodr.* 3. p. 477.

Sect. III. *RIBESIA.* Flores racemosi semper ad minimum 4-flori. Folia plicativa. Calyx campanulatus cylindricusve. *DC. l. c.* p. 479.

R. sanguineum, foliis cordatis 3-5-lobis serratis venoso-lineatis rugosis; supra pilosis: subtus tomentosis albicantibus, racemis laxo nutantibus, floribus confertis, petalis oblongis, bracteis ovato-spathulatis longitudine pedicellorum vel paulo longioribus, ovarium glanduloso-pilosum.

Ribes sanguineum. *Pursh. flor. amer. sept. v. 1.* p. 164. *DC. prodr.* 3. p. 482. *Ram. et Schult. syst.* 5. p. 497. *Spreng. syst.* 1. p. 811. *Sw. hort. brit. edit. 2.* p. 239. *Bot. reg.* t. 1349.

A stout tall-growing branching shrub: branches clothed with short rough pubescence, on a glossy brown bark that is much split and cracked on the lower part of the branches. Scales 4, surrounding the young shoots at the base, oblong, blunt, terminated by a short mucrone, becoming at length more or less reflexed at the point, and recurved at the edges; lower one shortest, tinged with red, smooth and glossy; upper ones fringed along the edges, and of a paler colour. Leaves 3 to 5-lobed, serrated, or sometimes doubly serrated, with unequal teeth, hairy and rugged, on the upper side of a darkish green; underneath densely clothed with soft wool, which causes a whiteness, strongly nerved with numerous pennately arranged nerves. Racemes many-flowered, crowded in a close cluster at the end of the peduncle, more or less nodding, rising as the flowers become expanded. Peduncle not leafy, sometimes nearly double the length of the leaves; at other times not so long as the leaves, of a red colour, thickly clothed with rigid hairs, all of which are tipped with a gland. Bractes ovately spathulate, bluntly rounded, hollow on the upper side, thickly clothed with small glands, and fringed with glandular hairs, of a dull red colour, much longer than the pedicles when the flower first expands, but these lengthen afterwards, and they are then nearly of a length.

Pedicles glandularly hairy, and clothed with numerous small short hairs besides. *Ovarium* also densely clothed with glandular hairs. *Calyx* red, tubular, inflated at the base, also clothed with glandular hairs, and numerous little glandless ones besides: *limb* 5-cleft, spreading: *segments* ovate, bluntly rounded, darkest at the back, and paler on the upper side. *Petals* erect, obovate, very small, scarcely half the length of the segments of the calyx, lilac-coloured, inserted in the mouth of the calyx. *Stamens* 5, alternate with the petals, and inserted between them: *filaments* smooth, inserted in the back of the anther, a little above its base: *anthers* 2-lobed, bursting in front for the exclusion of the pollen. *Style* smooth, exserted beyond the petals and stamens. *Stigma* 2-lobed.

This species of *Ribes* is of great importance to the embellishment of Gardens, particularly shrubberies and clumps, it being inferior in elegance to no hardy shrub we possess. Early in Spring it is clothed with innumerable pendulous racemes of purplish-red flowers. For many years it has been known to Botanists in a dried state; but it is to that indefatigable traveller, Mr. David Douglas, that we owe the introduction of it to our Gardens. So long ago as 1787, according to Mr. Douglas, Archibald Menzies, Esq. discovered this species near Nootka Sound, on his first voyage round the world; and since, on his second voyage with the celebrated Vancouver, in various parts of North West America. According to Mr. Douglas, it is the most common species at Point George, near the confluence of Columbia River. The Horticultural Society received the seeds from whence the plants in our gardens were raised, from Mr. Douglas, in October, 1826, forwarded across the Continent of America. It is as hardy as the common currant, and is propagated by planting cuttings in the Spring, or Autumn. The plant flowers in great profusion about the end of April, and beginning of May. Mr. Douglas says, that if the bushes were planted in a soil having a portion of lime rubbish mixed with it, the blossoms would be more profuse, and the colour, probably, of a deeper tint.

Ribes is a name which was given to an acid plant, by the Arabian physicians, which is supposed to be the plant now called *Rheum Ribes*.



1. Calyx. 2. Corolla spread open, shewing the insertion of the Stamens. 3. Ovary, Style, and Stigma.



E. D. Smith del.

Pub. by The Gray Soc. 1894

W. D. L.

SOLDANELLA alpina.*Alpine Soldanella.***Linnean Class and Order. PENTANDRIA MONOGYNIA.****Natural Order. PRIMULACEÆ. Brown prodr. p. 427.**

SOLDANELLA. Calyx 5-partitus. Corolla campanulata, ore lacero multifida. Stamina 5, filamentis antheras adnatas sagittatas superantibus. Stigma 1. Capsula apice multivalvis. Swt. brit. fl. gar. series I. No. 11.

S. alpina, foliis rotundo-cordatis obsolete repando-crenulatis margine subrecurvis, scapo 2-3-floro subpubescente, laciniis calycis oblongis obtusiusculis patentibus, corolla campanulata patente, stylo incluso.

Soldanella alpina. Linn. syst. veg. p. 194. Curtis. bot. mag. t. 49. Willd. spec. pl. 1. p. 808. Enum. hort. berol. 1. p. 192. Link enum. hort. ber. 1. p. 168. Jacq. aust. t. 13. Sturm. flor. germ. fasc. 20. Rasm. et Schultes syst. v. 4. p. 132.

Soldanella Clusii. Schmidt flor. boem. 1. n. 148.

Root perennial, tufted, scarcely producing shoots, but throwing up numerous leaves and flower stems. **Leaves** roundly cordate, kidney-shaped or sometimes ovate and attenuated a little way down the petiole, very slightly repandly crenate, the margins slightly bent backwards, smooth and glossy, of a dark glossy green on the upper side, and paler underneath, slightly winged a little way down the petiole. **Petioles** tinged with purple, flattened on the upper side and convex below. **Scapes** erect, two or three flowered, very slightly pubescent, and hardly tinged with purple. **Flowers** nodding, of an azure blue, larger than *S. pusilla*, and more spreading. **Bractes** unequal in size, one to each pedicle, the upper one longest, pressed close to the pedicle, lanceolate, acute; the others variable in size. **Pedicles** nodding, one-flowered. **Calyx** 5-cleft, the segments oblong or broadly lanceolate, bluntish, spreading wide open, quite free from the corolla, but closing partly up again when the flower is overblown. **Corolla** bell-shaped, spreading widely open when fully expanded, divided into five main divisions, which

are cleft into numerous other linear bluntish segments, the corolla being cleft about half way down. *Stamens* 5, inserted in the throat: *filaments* broad and flattish below the anthers, attached to their back, and extending beyond them in a blue point. *Anthers* two-celled, bursting in front to discharge the pollen. *Ovarium* pyramidal, smooth. *Style* slender, rather shorter than the corolla. *Stigma* a small simple head.

An old inhabitant of our gardens, having been introduced about the middle of the 16th century. It differs from *S. montana*, by the corolla being more deeply jagged, and by the more exserted style, and from *S. minima* by its crenated leaves. It is a beautiful little plant, native of the Alps of Europe, in Germany, Switzerland, &c. flowering in April and May. As it will not live in the open border, it must be grown in a pot, in a mixture of loam, peat, and sand, the pot to be well drained with sherds. It is only to be propagated by dividing the plant at the root.

The plant from which our figure was taken, flowered in the Nursery of Mr. Pamplin, Lavender Hill, Wandsworth Road.

The generic name is a diminutive of *solidus*, a shilling; the round leaves of the species being very like pieces of money, in shape.



1. Calyx. 2. Corolla spread open, shewing the 5 lacerated divisions. 3. The base of the Corolla, shewing the insertion of the Stamens. 4. Ovary, Style, and Stigma.



J. D. Smith del.

Pub. by J. D. Smith, Sep. 1891

W. D. L. L.

ORNITHOGALUM fimbriatum.*Fringed Star of Bethlehem.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* ASPHODELEÆ. *Brown prodr. p. 274.**ORNITHOGALUM.* *Supra fol. 42, series 2.*

O. fimbriatum, racemo subcorymboso paucifloro, pedunculis fructificantibus refractis, bracteis elongato-lanceolatis acutis pedunculis parum brevioribus, perianthis laciniis lanceolatis acutis, filamentis basi dilatatis, foliis linearibus acutis basi vixle attenuatis subtus hirsutis margine fimbriatis, scapo hirsuto.

Ornithogalum fimbriatum. *Willd. nov. act. nat. cur. ber. 3. p. 420. M. B. flor. Taur. cauc. 1. p. 276. Suppl. p. 286. Schult. syst. veg. 6. p. 531. Spreng. syst. 2. p. 30.*

Bulb solitary, seldom producing any offsets. *Leaves* 5, in our plant, erect when the plant is in flower, afterwards lengthening out and spreading, linear and acute, hollow on the upper side, and convex below, the sides nearly closed in near the base, of a bluish green, and smooth on the upper side, underneath densely clothed with short rigid hairs, and fringed round the margins, longitudinally marked with numerous lines from the base to the point; those in our plant when in flower six inches and a half in length. *Scape* erect, very slightly angular, scarcely half the length of the leaves, thickly covered with very short hairs, some few of which extend even to the peduncles and bractes. *Raceme* somewhat corymbose, in our plant 8-flowered; the three lower ones nearly in a whorl, the others alternate; the part of the scape between the peduncles angular, smooth, and of a glossy green. *Bractes* membranaceous, narrow-lanceolate, tapering to a long slender point, sheathing the peduncle a great part of their length. *Peduncles* spreading, ascending at the points, a little longer than the bractes, after flowering

bent downwards, their points ascending, here and there bearing a few scattered short hairs. *Perianthium* 6-parted nearly to the base, spreading when the flower is expanded, segments lanceolate, acute, the three outer ones rather broadest, white inside, the back green, edged with a broad band of white. *Stamens* 6, inserted in the receptacle: *filaments* dilated at the base, scarcely above one third the length of the perianthium, attached to the back of the anthers. *Ovarium* acutely 6-angular, smooth. *Style* smooth, scarcely so long as the stamens. *Stigma* slightly three-lobed.

An elegant species, native of Tauria, in groves and on the edges of woods. It is nearly allied to *O. umbellatum*; but it is distinguished from that species by the fringed leaves. The plant from which our figure was taken flowered in the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham; and where it continued to flower nearly all the Summer. The plant is hardy, and thrives best in a light soil. It is propagated by offsets from the old bulbs.

The generic name is derived from *ορνιθος*, a bird, and *γαλα*, milk; probably from the white flowers of most of the species; but no good explanation has been given of the name.



1. Stamens. 2. Style and Stigma.



E. G. Smith, dec.

Bot. by J. B. Gray, 1850, in "Ibid."

W. G. Smith

SALPIGLOSSIS Barclayana.

Mr. Barclay's Salpiglossis.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SOLANÆÆ. *Brown prodr.* 1. p. 443.

Sect. II. Corolla non plicata, regularis. Stamina didynama. Embryo leviter arcuatus. Pericarpium capsulare v. baccatum.

SALPIGLOSSIS. Calyx 5-angularis, 5-fidus. Corolla infundibuliformis, limbo 5-lobo. Filamentum quintum sterili inter stamina longiora. Stylus apice linguiformis. Stigma truncatum, transversum. Capsula ovata, 2-locularis, bivalvis: valvis bipartilibus. Dissipimentum contrarium, utrinque placentiferum. Semina numerosissima, erecta, angulata, compressiuscula, truncata, extis pinctis plurimis elevatis scabra: testa duplex, exterior crassiuscula crustacea, interior tenuissime membranacea albumini adnata: albumen copiosum, carnosum. Embryo teres, curvatus, luteus. Cotyledones breves, ovales, obtusæ, hinc planæ, inde convexæ. Radicula cylindrica, obtusissima, cotyledonibus duplò longior centripeta. *D. Don Mss. in series I. t. 231.*

S. Barclayana, utrinque pilosa, foliis oblongis obtusis basi sub-attenuatis sinuatis, lobis obtusis: superioribus subsessilibus linearibus ciliatis utrinque glanduloso-pilosis, floribus paniculato-racemosis: lobis corollæ inferioribus multo minoribus omnibus emarginatis, lobis calycis carinatis glanduloso-glutinosus.

Salpiglossis Barclayana. *Cameron Mss.*—*Salpiglossis intermedius.* *Swt. hort. brit. edit. 2. addend. p. 594.*

Stem suffrutescent, apparently biennial, or sometimes continuing for several years, as we have seen them at Mr. Westland's Nursery, at Dorking, very hard and frutescent at the base. *Petioles* thickly clothed, as is every other part of the plant, with glandular glutinous hairs. *Leaves* very variable: lower ones on long footstalks, oblongly-oval, nearly entire, or with a blunt notch or 2 on each side: those higher up the stem oblongly-oval, tapering both to the base and point, generally producing about 4 shallow obtuse lobes on each side: *smaller leaves* lanceolate, acute,

sharper-toothed ; *upper ones* linear, entire, sessile, thickly clothed with glandular hairs. *Flowers* panicled, terminated in racemes, and in the axils of the forks. *Flower-stems* glandularly glutinose. *Calyx* 5-angular, 5-cleft: segments obtuse. *Corolla* tubular, funnel-formed, abruptly attenuated downwards, of a bright brown, on a yellow ground, becoming darker by age. *Stamens* 4, didynamous, two longer than the other 2, inserted in the tube, where it begins to increase in size, with a sterile one inserted between the 2 long ones : *filaments* hairy below and smooth upwards, the upper part pale blue: inserted in the back of the anthers, a little above the base : *anthers* 2-lobed, lobes opening at the sides for the ejection of the pollen : *pollen* golden yellow. *Ovarium* smooth, pyramidal. *Style* smooth, flattened a little below the stigma, but not toothed as in *S. sinuata*. *Stigma* truncate, transverse.

The present plant is a hybrid, between *S. picta* and *S. purpurea*, raised from the seeds of the former by Mr. Cameron, formerly Gardener to the late Robert Barclay, Esq.

If the seeds of this plant are sown on a hot bed in Spring, and the plants planted out in the open border about the end of April, or beginning of May, they will be in full flower in July ; or if the plants are protected from the frost, during Winter, they will survive ; and in this case they will flower very early in Spring.

Our figure was taken from a plant that flowered in the Nursery of Mr. Lee, of Hammersmith.

The generic name is derived from *σαλπιγξ*, a tube, and *γλῶττα*, a tongue ; in allusion to the species having a small tongue-shaped process, or a sterile filament in the tube.



1. Calyx. 2. Corolla laid open, shewing the insertion of the Stamens. 3. Ovary, Style, and Stigma.



T. L. Smith

Pub. by "Hologram" Dec. 1881

W. H. H. H.

GANYMEDES concolor.

Sulphur-coloured Ganymedes.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 298.

Sect. 5. *Spatha* monophylla, 1-7-flora. *Perianthium* tubulosum, petaloideum, 6-partitum, coronatum.

GANYMEDES. *Supra* fol. 90.

Corollæ (*Perianthii*) laciniae Cyclaminum more reflexæ; coronâ pendula poculiformi duplo vel plus longiores. *Genitalia* recta gracilia valde inæqualia. *Filamenta* tria tubo breviora et eo connata fere ad antheras erectas lineares: tria alia e tubo progredientia usque ad 3 lineas, et libera ultra tubum at coronâ breviora. *Stylus* coronâ longior usque 2-3 lineas et ultra, *stigmatē* trilobo exiguo pallido.—*Herbæ bulbosæ elegantes Europææ Corbulariarum foliis et habitu, at majores, et spathis 2-7-floris floribus cernuis mutantibusve, albis; sive pallidissime luteis, stramineisve, et delicatissime suaveolentibus.* *Haworth supp. pl. succ. Narcis. Revis.* p. 131.

N. concolor, 2-4-florus corollæ submutantibus, laciniis subreflexis, coronâ truncata integra triplo longioribus, stylo longe exserto.

Ganymedes concolor. *Haworth loc. cit.* p. 131.—*Monogr. Narcissin.* p. 4.

Nô. 2.

Narcissus juncifolius flore luteo reflexo. *Park. parad.* p. 92

Bulb obversely top-shaped, producing a large cluster of small white fibres at the base, the upper part ending in a 2-valved membranaceous sheath, which encloses the leaves. *Leaves* succulent, very long, linear, tapering to a blunt point, deeply channelled on the upper side, owing to the sides being folded inwards, deeply furrowed with numerous furrows underneath. *Scape* shorter than the leaves, slightly angular, striate, inclining to glaucous. *Flowers* 2 to 4, nodding, of an elegant straw colour. *Sheath* membranaceous, acute, bursting on one side for the expansion of the pedicles, which it encloses at the base. *Pedicles* unequal in length, bluntly 3-sided. *Germen* smooth, bluntly 3-sided. *Perianthium* tubular, limb 6-parted, segments oblongly ovate, mucronate,

imbricate at the base, a little twisted and recurved, rather longer than the tube, of a bright straw colour. *Crown* of the same colour as the segments, truncate, more or less wavy, entire, nearly 3 times shorter than the segments. *Stamens* 6, three inserted in the mouth of the tube; and about half the length of the crown; the other 3 inserted lower down in the tube, and scarcely reaching beyond the mouth: *filaments* short and smooth: *anthers* incumbent. *Style* smooth, exerted at some distance beyond the crown. *Stigma* small, 3-lobed.

The drawing was taken from the rich Garden of the Horticultural Society at Chiswick, a few years ago. Probably, a native of the Pyrenees; thrives in light loam, and a warm situation, or near a wall; and is propagated by offsets, but is at present very rare, and flowers late in April.



1. Flower spread open, to show the insertion of the stamens. 2. A detached anther, with the upper part of its filament, which is not attached to the tube of the corolla, although its under part is, as appears by the visible line which it forms. 3. The Germen, with its attached style, ending in its small pale trilobulately rounded stigma, all magnified.



E. D. Smith del.

Pub. by Botany School

PHLOX corymbosa.*Corymbse-flowered Lychnidea.*

Natural Order. POLEMONIACEÆ. *D. Don obs. on Polemon. p. 4.*
PHLOX. Supra fol. 29 et 190.

P. corymbosa, caule erecto pubescente superne ramoso, foliis oblongo-lanceolatis acuminatis undulatis subtus pubescentibus margine scabris, corymbis paniculatis, dentibus calycinis subulatis, corollæ laciniis rotundato-obovatis.

Phlox corymbosa. *Hortulanorum.*

Perennial. Stem erect, in strong soil attaining the height of three or four feet, densely clothed with a short pubescence, at first 4-sided, but the lower part becoming round and smooth by age, branched with numerous short slender branches above the middle, more or less purple. *Leaves* on very short footstalks, or nearly sessile, opposite, oblongly-lanceolate, tapering to a slender point, also tapering towards the base, but rounded off at the footstalk, more or less undulate, pinnately nerved, the veins all connected within the margin, and forming arches, reticulately veined underneath and the nerves pubescent, the margins very rough. *Corymbs* terminal, panicled, the branches many-flowered. *Flowers* fragrant, of a purple lilac, with a white star at the base. *Bractes* narrowly lanceolate, tapering to a slender point. *Pedicles* short, thinly clothed with a short pubescence, purple. *Calyx* tubular, membranaceous between the teeth which are subulate, and dark purple. *Corolla* tubular, with a 5-cleft, spreading limb: tube slender, curved, more than twice the length of the laciniæ of the limb, which are spreading, broadly obovate, rounded, at first flat and imbricate, afterwards the margins become revolute, and distinct. *Stamens* 5, inserted in different parts of the tube, the points of two only exerted: *fila-*

ments short and slender : *anthers* linear. *Ovarium* smooth and glossy. *Style* smooth, slightly exserted. *Stigma* trifid, the segments blunt, erect, or slightly spreading.

Our drawing was made from a specimen communicated from Mr. Barclay's rich collection, at Bury Hill, in the Summer of 1830 ; and we have also received it from the Nursery of Messrs. Young's, of Epsom. From their extensive collection of hardy shrubs and plants likewise, we ought to have stated, on page 109, that our figure of the beautiful *Ribes sanguineum* was also made.



1. Calyx.
2. The tube of the flower laid open, to shew the insertion of the stamina.
3. Ovary and style, terminating in 3 stigmas.



F.D. Smith del.

Sketch by F. Smith, Nov. 1888

W. H. H. H.

ORÓBUS luteus.

Yellow Bitter Vetch.

Natural Order. LEGUMINOSÆ. *DC. prodr. 2. p. 93.*

Subordo I. PAPILIONACEÆ.—Tribus IV. VICIÆÆ. Supra fol. 194.

OROBUS. *Calyx* campanulatus, 5-fidus, lobis 2 superioribus brevioribus. *Corolla* papilionacea. *Stamina* diadelfa. *Stylus* gracilis linearis apice villosus. *Legumen* cylindraceum oblongum 1-loculare bivalve polyspermum. *Semina* hilo lineari.—*Herbæ erectæ.* *Stipulæ semisagittatæ.* *Petioles in setam brevem simplicem desinentes.* *Folia abruptè pinnata paucijuga.* *Racemû axillares pedunculati.* *DC. prodr. 2. p. 378.*

- O. luteus**, glabriusculus, caule simplici anguloso, foliis 3-5-jugis, foliolis elliptico-lanceolatis subtùs glaucis mucronulatis, stipulis semisagittatis basi dentatis foliolis multò minoribus, pedunculis elongatis multifloris folium vix æquantibus adscendentibus, calycibus glabriusculis: dentibus inæqualibus brevibus, leguminibus compressis longitudinaliter reticulato-venosis sessilibus, seminibus globosis variegatis. *DC. prodr. 2. p. 378.*
Orobis luteus. *Linn. spec. 1028.* *Willd. sp. pl. 3. p. 1073.* *Pers. syn. 2. p. 303.* *Hort. Kew. ed. 2. v. 4. p. 303.* *Spreng. syst. 3. p. 260.—Gmel. sub. 4. p. 13. t. 4.*

Root perennial. *Stems* erect, simple, or two or three branches coming from the base, angular, nearly smooth, or very slightly pubescent. *Leaves* pinnate, bearing from three to five pair of leaflets; *leaflets* opposite, or rarely alternate, elliptically lanceolate, terminated in a sharp soft mucrone, reticulately veined, of a pale green, underneath slightly glaucous, the nerves slightly pubescent. *Petioles* clothed with weak spreading hairs, channelled on the upper side and keeled on the lower, terminated in a small narrow leaf-like appendage. *Stipules* semisagittate, lanceolate, taper-pointed, more or less toothed, pubescent. *Racemes* several-flowered. *Flowers* from orange to a pale straw-colour. *Peduncle* about the length of the leaf, nearly smooth, angular. *Pedicles* short, nodding. *Calyx* campanulate, slightly pubescent; *laciniae* very unequal, two upper ones very short, and curved inwards

towards each other, the three lower ones lanceolate, taper-pointed, about the length of the tube. *Vexillum* oblongly obovate, channelled on the upper side, and keeled underneath. *Wings* shorter than the vexillum, on long slender ungues, auriculate on one side, the ears very large, and curved inwards. *Keel* acute, sharply keeled. *Stamens* 10, diadelphous, nine joined more than half their length, the points slender and distinct, the other distinct its whole length. *Ovarium* clothed with long weak hairs. *Style* slender, smooth below, and villous on the inside, on the upper part.

Our drawing was made from a plant in Chelsea Physic Garden, in the month of June, 1830, communicated to that fine collection by Dr. Fischer, Superintendant of the Imperial Botanic Gardens of St. Petersburg, in the year 1818. It is perennial, and encreased by seeds, or parting the roots in Autumn, after flowering, or in Spring, in the usual manner.



1. Calyx. 2. Vexillum. 3. The two wings. 4. A front view of the keel. 5. A side view of the same. 6. The united stamens laid open, with the disunited stamens near them. 7. The young seed pod terminated by its style.



L. To. C. 1894. 1894.

Pub. by J. H. Gregory, Oct. 1892.

W. 1894.

TULIPA Bonorotiana.*Bonorata Tulip.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* TULIPACEÆ. *Kth. Synops.* 1. p. 292.*TULIPA.* *Supra folio* 102.

T. Bonorotiana, caule pubescente foliis longiore, perianthio campanulato-patulo; segmentis elliptico-lanceolatis acutis apice barbatis margine involutis; macula basi rhombeâ parva.

Tulipa Bonorotiana. *Bertolon. in litt. ad Schultz. Reboul. nonn. spec. Tul. not. p. 7. Schult. syst. veg. v. 7. p. 375.*

Root bulbous, broad at the base, where it terminates in a dense tuft of small fibres, tapering upwards, smooth, clothed with a thin torn brown membrane. *Scape* leafy, roughly pubescent, being densely clothed with short rigid hairs, longer than those on the leaves, by which it differs from *T. stragulata*, a species we unluckily let pass without notice, though we were in time to recognise it by its character. *Leaves* variable in size, of a glaucous green, the lower ones very broad, and beautifully undulated, shortly fringed with short stiff hairs: stem ones much narrower, attenuated to the base, and clasping the stem, attenuated to a long taper point, densely covered with short stiff hairs, deeply channelled on the upper side, and keeled below, striated with numerous prominent longitudinal lines. *Flower* campanulately spreading, when in bloom of an exquisite faint scent, inside of a vivid brick colour, not much shining, outside of a very pale yellow marked with red: *Interior segments* marked longitudinally down the centre with two lines of yellow; all the segments densely bearded with a bunch of wool at the end. *Spots* at the base of each segment of a vivid blue: outer segments smaller and narrower than the inner ones. *Ovarium* superior, of a considerable length, acute 3-angled, and ribbed up the centre of each valve, clothed with short wool. *Stigma*

sessile, large, and spreading, 3-lobed, lobes very large and spreading, densely covered with thick hairs on all sides, beautifully crested, and reflexed, the margins also reflexed.

Our figure was taken from the rich collection in Chelsea Physic Garden. We detected it amongst a number of other Tulips, the roots of which were sent to the Honourable Company of Apothecaries, of London, from abroad, as *Colchicums*; which, on Mr. Anderson's planting them in their Garden at Chelsea, produced the flowers of several species of Tulipa. It is ornamental, and of easy culture, by parting the bulbs, when quiescent, in the usual way.



1. Stamen. 2. The 3-sided Ovarium, terminated by its large 3-lobed crested Stigma.
3. Bulb.



Peckia, P. Peckia, n. 1852

W. Peckia

RHODODENDRON pūlchrum.

Pretty Rhododendron.

Linnean Class & Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICEÆ. *D. Don prodr. fl. ncp. p. 148.*

Subordo III. RHODORACEÆ. D. Don loc. cit. p. 152.

RHODODENDRON. *Supra folio 10. series 2.*

Sect. III. TSUTSUSI. Flores terminales, 1-3. Calyx 5-partitus: segmentis longis erectis angustis acutis. Corolla tubulosa, rotata, 5-partita: segmentis patentibus. Stamina 10, inæqualia adscendentia aut sub-erecta.—Frutices erecti aut patentes ramosi, sempervirentes aut sub-decidui: ramis virgatis, junioribus pilosis. Folia hirsuto-strigosa. Flores terminales subsolitarii aut gemini.

R. pulchrum, floribus 2-3 terminalibus, calyce erecto 5-partito hirsutissimo: segmentis lineari-subulatis, staminibus subadscendentibus, stylo multo brevioribus, foliis ellipticis acutis.

Rhododendron indicum γ *Smith. Syst. hort. brit. ed. 2. p. 343.*

A handsome stout branching shrub: *branches* spreading, densely clothed with glossy ferruginous hairs, close pressed upwards to the stem. *Leaves* elliptic, acute, tapering to the base, thickly clothed on the lower side with long ferruginous hairs, all bending inwards, very much crowded on the nerves and veins; feather-nerved and reticulately veined; upper side less clothed with hairs, which are white, and nearly prostrate, all pointing to the end of the leaf. *Petioles* rather short, channelled a little on the upper side, and rounded below, thickly clothed with ferruginous hairs, close pressed to the stem. *Flowers* 2 to 3, terminal. *Peduncles* clothed with feathered long white hairs, which give them a singular appearance, not half the length of the leaves. *Calyx* deeply 5-parted, nearly to the base; the segments erect, very long, linear at the base, and terminating in a long subulate point, thickly clothed and fringed with long, spreading, feathered hairs. *Corolla* very large and handsome, above 2 inches in

length, and about 3 in width, when expanded ; of a bright rosy purple, spotted on the inside with bright red spots ; *tube* about three fourths of an inch in length, strongly but bluntly 5-angled : *limb* 5-cleft, spreading ; the two upper segments largest and broadest, ovate, rounded at the ends, spotted from about the middle, and a good way down the tube, with bright red spots : lower segments elliptical or oval, rounded at the ends, not spotted. *Stamens* 10, unequal, a little ascending : *filaments* rosy, clothed about half way up with short pellucid hairs : *anthers* opening by two holes at the point, for the exclusion of the pollen : *pollen* white. *Ovarium* densely clothed with long white close-pressed hairs. *Style* quite smooth, considerably longer than the stamens, rose-coloured. *Stigma* a red glossy rugulose head.

This elegant mule Rhododendron is the produce of *R. ledifolium*, of Hooker, impregnated by the pollen of the Old Red *R. indicum*. It was raised from the seed of the former species by Mr. Smith, of Coombe Wood, Kingston, about four years ago, along with several other hybrids of the same genus, which Mr. Smith thinks will all flower in the next Spring.

The shrub thrives best in sandy peat, mixed with a little light loam ; and cuttings, taken from young wood, root freely, planted in sand, with a bell glass placed over them. The plant requires protection in Winter.



1. Pedicel and Calyx, showing the six divisions. 2. A filament, with its anther.
3. Ovary, style, and stigma.

HERMIONE Trewiana.

Trew's Hermione.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 290.

Sect. 1. Radix bulbosa. Flores spathacei, umbellati, raro solitarii.

HERMIONE. *Spatha* 1-multiflora. *Perianthii segmentis* in stellam patentes; coronâ parvâ caliciformi 3-5-plo longiores. *Tubus* gracilis angulato-cylindricus corollæ laciniis longior, viridis. *Filamenta* toto tubo adnata apice solum semilineam libera; tria tubo longe breviora, tria ejus longitudine. *Anthera* parvulæ trigono-ovatae erectæ, tres tubo inclusæ, tres cum semisuperantes. *Stylus* rectus inclusus. *Stigma* plus minus trilobato-trifidum, lobis rotundatis. *Supra folio* 92. *Haworth in Narc. Revis. in supp. plant. succ.* p. 137.

Tribus II. **TAZZETTA.** Folia lorato-sublinearia obtusa viridescens, glauca v. glaucescentia. Scapi elevato-striati multiflori. *Tubus* angulato-cylindricus raro semicylindricus (*H. fistulosa*), elongatus. *Corona* cyathiformis v. cupularis aut rotata, integra plus minusve lacera, lobata aut crenulata.

Sect. I. *Floribus albis, segmentis perianthii ovatis ellipticive obtusis aut acutis sæpius mucronulatis.*

H. Trewiana, umbellis plurifloris, perianthii segmentis ovatis apice breve mucronulatis cum prima florentia imbricata posteriora subreflexo tortuosa, corona patula pollubrifloris lobatim-crenulata subplicatula lutea.

NARCISSUS Trewianus, folus lineari-loratis carinatis, scapo tereti ancipiti striato, pedicellis spatha sub-longioribus, corollæ tubo germine 3-plo longiore, corona laciniis sub-duplo breviora, campanulato-rotata plicato-corrugata obsolete trilobo-repanda, margine inæquabiliter fissa, subdentato-erosula. *Ker Botan. magaz. fol.* 1298, *in emendanda.*

Narcissus orientalis a. *Botan. magaz. t.* 940.

Hermione grandiflora. *Haworth in. supp. plant. succ.* p. 141.

Narcissus grandiflorus. *Haw. in Synops. pl. succ. app.* p. 332.

Hermione crenularis. *Salisb. in hort. trans. v. 1. p.* 263. *excl. syn.* *Haw.*

Bazelman major. *Trew flor. imag. 1. t.* 23.

N. latifolius byzantinus major luteus. *II. Clus. hist. 1. p.* 154.

N. anglicus polyanthos. *Park. parad. terr. 82. t. 81. f.* 6.

N. polyanthos major albus calyce medio croceo-luteo. *Rudb. clys. t.* 60. *f.* 6.

Bulb rounder than in other related species, clothed with irregular brown shelly scales. *Sheath*, surrounding the leaves, striate, higher on one side than the other, in which it differs from *H. obtusifolia*, a nearly related, but very different species. *Leaves* from 2 to 4, or from 6 to 8 inches long when not forced, but much longer when forced; three fourths of an inch broad at the base, tapering upwards, and ending

in rather a bluntish point, but more acute than most of the related species; furrowed on the upper side and keeled below, longitudinally striated, somewhat glaucescent. *Scape* in plants, not forced, longer than the leaves, very stout and succulent, solid below, but hollow from about the middle, roundly subcompressed, with a sharp angle on each side, and striated longitudinally with numerous prominent lines, a little glaucescent or mealy. *Spathe* ovate, acute, membranaceous, striated, not half the length of the front peduncles, but about even with the back ones. *Umbels* 4 to 8-flowered, most frequently 6-flowered; pedicels acutely 3-angled, flat at the back, the upper angle rather inconspicuous, so as to make them subsemicylindrical, longitudinally striated with several lines; front ones 4 inches in length; back ones 2 inches, all more or less varying in height from the two extremes. *Ovarium* ovate, acutely 3-sided. *Tube* of the flower bluntly triangular, with a longitudinal line on each side between the angles, about half as long again as the segments of the limb. *Segments* ovate, tapering to the base, white, every other one terminated by a short mucrone, the others ending in a small callosity: when first expanded, flat and closely imbricate; at length becoming more or less twisted. *Crown* about one fourth of an inch in height, nearly three fourths of an inch across, bason-formed, rugulose, and crenulated at the margin, of a golden yellow. *Stamens* 6, inserted in the mouth of the tube; 3 extending beyond it, and 3 equal to it: *filaments* very short, inserted about the centre of the back of the anthers. *Style* smooth, flat, and slightly furrowed on 2 sides. *Stigma* of 3 short rounded lobes, slightly reflexed at the points, and pustulose. *Ovula* numerous, the seeds obovate, smooth.

It is impossible that the present species can produce seed of itself without assistance, as the stigma is so far below the stamens, that the pollen cannot come in contact with it; most probably this is effected by insects in its natural habitats.

Our drawing was made from a bulb received from Mr. Charlwood, Seedsman, Covent Garden, which flowered in our Garden, at Chelsea, last Spring.

The generic name is from Hermione, the daughter of Menelaus and Helena.



1. The tube of the flower laid open, to show the insertion of the stamina. 2. The ovary, with its style and 3-lobed stigma.



PHILADELPHUS hirsutus.*Hairy Syringa.***Linnean Class and Order. ICOSANDRIA MONOGYNIA.**

Natural Order. PHILADELPHÆE. *Calyx* turbinatus, limbo 4-fido (raro 5-fido), persistens. *Petala* 4 (raro 5), calycinis laciniiis alterna, in saturatione convoluta-imbricata. *Stamina* 20-40, duplici serie disposita, fauci calycinæ inserta. *Styli* 4, raro 5 infernè sæpiùs coaliti. *Stigmata* longa, divaricata, obtusa, latere interiore puberula, nunc spiraliter torta. *Capsula* semi-infera, subliguosa, 4 (raro 5)-locularis, polysperma, apice quadrifariàm loculicido-dehiscens. *Semina* scobiformia, subulata, lævia, angulis placentæ tetragonæ cumulatim adnata, arillo laxo membranaceo, ad umbilicum foramine fimbriâ laceratâ aperto, nucleo seminis triplò longiore instructa: *testa* tenuissima, membranacea, nucleum arcuè vestiens: *albumen* ovoideum, carnosum, album. *Embryo* inversus, lacteus, ferè albamini longitudine: *cotyledones* ovales, obtusæ, planiusculæ: *radicula* teretiuscula, cotyledonibus plurimùm longior, supera, recta, obtusa.—Frutices (Europæ, Asiæ, et Americæ temperatis communes) *erecti, decidui*. *Folia* opposita, nervosa, *dentata, impunctata*. Flores oppositè axillares, *terminalis, subracemosi, albi*. D. Don's observations on Philadelphææ and Granteæ, in the Edinburgh New Philosophical Journal, 1826, p. 133.

PHILADELPHUS. *Calyx* 4-5-fidus. *Petala* 4-5. *Filamenta* simplicia. *Styli* 4-5, sæpè coaliti. *Capsula* 4-5-locularis, polysperma. *Semina* arillata.

P. hirsutus, foliis ovatis acutis subquinque-nerviis acutè denticulatis sub-tus canescenti-villosis reticulato-venosis, floribus terminalibus subternis, stylis stigmatibusque coalitis.

Philadelphus hirsutus. *Nuttall gen. amer.* 1. p. 301. *Decand. prod.* 3. p. 206.

A handsome little shrub, with numerous short slender branches; the plants that we have seen, about 4 or 5 feet high; *branches* roughish and hairy when young. *Leaves* on short footstalks, ovate, or ovate-oblong, acute, sometimes shortly acuminate, more or less furnished with short sharp teeth, triply nerved with two lateral branches, more or less distinct, and reticulately veined, thickly clothed underneath with a shaggy hoary pubescence; the upper side hairy

when young, afterwards becoming almost smooth. *Petioles* short, furrowed on the upper side and rounded on the lower, rough and pubescent. *Flowers* frequently in threes, terminal, large and white, generally 4-petaled, but sometimes increased to 5 or 6. *Peduncle* short, warted, thickened upwards. *Bractes* small, setaceous, inserted just below the base of the ovarium, deciduous. *Calyx* 4-cleft, or rarely 5-cleft; the laciniae ovate, lanceolate, taper-pointed, spreading, clothed with close-pressed hairs. *Petals* 4, or sometimes increased to 5 or 6, inserted in the calyx, alternate with the laciniae, ovate, rather acute, spreading. *Stamens* above 50, inserted in the calyx and base of the petals, in a double series, unequal in length: *pollen* yellow. *Ovarium* half inferior, the lower part enclosed in the tubular part of the calyx. *Styles* frequently 4, sometimes 5 or 6, connected together. *Stigmas* 4 to 6, spathulate, extending beyond the anthers, connected together.

This interesting species was detected on the banks of the French broad river, Tennessee, near the Warm Springs, by Mr. Nuttall, who has given a description of it in his valuable work on the genera of North American Plants. There is a variety of this cultivated in the gardens, under the name of *gracilis*, whose distinction is made to consist in the leaves being 3-nerved, but the number of nerves is a character of no importance in this genus. The plant succeeds well in the common garden soil, and it is readily propagated by cuttings.

Our drawing was taken from a plant which flowered in the Nursery of Messrs. Whitley, Brames, and Milne, Fulham.

Philadelphus from *φιλadelphος*, the name of a shrub mentioned by Athenæus, and first applied to the present genus by Caspar Bauhin.



1. The calyx in front, with the ovary; style and stigmas in their natural situations.
2. The stamens spread open. 3. A detached petal.



Salix - Redwing Her 1881

Widdell

MÁLVA Miniàta.

Vermilion-flowered Mallow.

Linnean Class and Order. MONADELPHIA POLYANDRIA.

Natural Order. MALVACEÆ. *Brown congo*, p. 8. *Kunth diss.* 1822, p. 1. *DC. prod.* 1. p. 429. *Malvaceæ. Sections* 1-2-3. *Juss. gen.* 271.

Div. I. Calyx duplex seu involucreo cinctus. *DC. prod.* 1. p. 429.

MÁLVA. Calyx cinctus involucreo 3-phylo rarius 5-6-phylo; bracteolis oblongis setaceisve. Carpella capsularia plurima in orbem disposita. *DC. prod.* 1. p. 430.

§. 7. *Multifloræ; floribus purpurascensibus, miniatis aut albis, pedunculis axillaribus multifloris, involucello 3-phylo, foliis angulatis.*

M. miniata; fruticulosa; foliis ovato-cordatis trilobis irregulariter crenato-lobatis tomentosis; peduncles axillaribus racemosis sub-quinquefloris, floribus secundis.

M. miniata. Cav. icon. 3. t. 278. *DC. prod.* 1. p. 435.

A suffrutescent, much branched, upright plant, about three or four feet high; *branches* upright, smooth at the base, but beset with white soft stellate tomentum towards the top. *Leaves* ovate, somewhat cordate at the base, slightly 3-lobed, the middle lobe much elongated, all obtuse and lobately-crenate, white from stellate tomentum beneath, as well as the petioles, greenish on the upper surface, and covered with minute stellate pubescence. *Stipules* lanceolate, subulate, one on each side of the petiole at the base. *Peduncles* axillary, usually about equal in length to the leaves, and generally bearing about five flowers each, beset with stellate tomentum. *Flowers* all leaning to one side of the peduncle, which is usually terminated by a small leaf, about the size of those of *M. limensis*; of a vermilion colour, on very short pedicels. *Involucrum* of three very narrow linear tomentous leaflets, which are shorter than the calyx.

Calyx clothed with white stellate tomentum, 5-lobed, the lobes ovate, triangular, and acute. *Petals* cuneiform, unguiculate, slightly denticulated at the apex; the claws thick and narrow, of a purplish colour, and the limbs of a vermillion colour. *Stamens* numerous, monadelphous, the column pilose. *Anthers* purplish, bursting by one cell; *pollen* yellow. *Style* crowned by numerous stigmas.

This elegant species of Mallow appears to have been introduced to our gardens as early as the year 1798, but its native country is still unknown. It is supposed to be a native of Chili. Being a late flowering plant, it is of great importance to the decoration of flower borders and shrubberies in the months of October and November, at which time it is profusely clothed with fine vermillion coloured blossoms; but as the plant is apt to die in severe winters, if left without protection, it therefore should be sheltered by the haulm of other herbage at that season, or by covering it with a mat.

It may either be increased by cuttings, planted under a hand-glass, or by seeds, which sometimes ripen in this country.

Our figure was taken from a fine plant that flowered in the Nursery of Messrs. Allan and Rogers, at Battersea.

The generic name is said to be altered by the Latins, from the Greek word *μαλαχη*, soft, which comes from *μαλασσω*, to soften; in reference to the soft mucilaginous qualities of the species.



1. Calyx, shewing the 5 lobes, and the 3 linear leaflets of the involucre. 2. Stamens, and pilose column. 3. Ovary, style, and numerous stigmas.



I.D. Smith del

Print by H. B. Rogers for 1883

PHYCELLA Ignea. var. pulchra.

Miss Reinagle's Chile Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEE. *Brown prodr.* 296.

PHYCELLA. *Perianthium* subringens, convoluto-clausum, 6-partitum: tubo brevissimo. *Stamina* 6, declinata, fauci tubi inserta: *alternis* brevioribus; nunc basi appendiculata, nunc intra anulum fimbriatum inserta, nunc appendicibus annuloque destituta. *Stylus* declinatus. *Stigma* simplex, incrassatum. *Caprula* trilocularis, polysperma, seminibus atris, planis, membranaceis.—*Plantæ* bulbosæ *Americæ australis temperatæ*, floribus rubris purpureisque, integumentis bulborum atris. *Lindl. in Bot. Reg.* t. 1341.

P. ignea, umbellâ multiflorâ, perianthii recti segmentis limbo ovatis apiculatis, processibus stamineis plerumque elongatis subulatis. *D. Don Mus. Phycella ignea.* *Lindl. l. c. t. 923*, in textûs notâ. *Herbert in Bot. Mag.* t. 2687.

Amaryllis ignea. *Lindl. l. c. t. 809.*

Bulbus ovatus, induviatus, atrofuscus, *ovi gallinæ* magnitudine, collo abbreviato, truncato. *Folia* plura, disticha, recurvato-patula, lineari-lorata, obtusissima, glauco-viridia, pruinosa, suprâ concaviuscula, subtûs leviter sulcata, margine obtuso; spithamæa v. pedalia, vix semunciam lata, plantâ deflorescenti, longitudine increscenti sæpè demùm cubitalia. *Scapus* pedalis, et ultrâ, erectus, teres, fistulosus, levitèr sulcatus, infernè purpurascens, calamo scriptorio dimidio crassior. *Umbella* multi (6-9)-flora. *Spatha* diphylla: *foliolis* oblongo-lanceolatis, obtusis, concavis, nervosis, obliquè carinatis, membranaceis, marcescentibus, albo-virescentibus. *Flores* cernui. *Pedunculi* obtusè trigoni, plerumque bipollicares et ultrâ, bracteis plurimis linearibus obtusis scariosis interstincti. *Perianthium* hexapetaloideo-partitum, convolutotubulosum, sesquiunciale, rubrum: *tubus* basi coarctatus, obsolete trigonus, luteo-virens, intûs copiosè nectariferus: *limbo* parùm obliquo: *segmentis* lineari-spathulatis, canaliculatis, nervosis, mucronulo abrupto calloso tuberculiformi apiculatis: *laminâ* apice ovatâ recurvato-patenti; *interioribus* 3. muticis, vix longioribus: *supremo* majori. *Stamina* 6, tubo

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perianthii adnata, declinata ; 3 segmentis perianthii exterioribus opposita, paullò breviora : *filamenta* subcompressa, glabra, apicibus incurvatis, perianthio concoloribus, basibus magis dilatatis, confluentibus, et faucem ipsam perianthii tubi ferè omninò cludentibus, processibus plerumque elongatis subulatis erectis interjectis. *Antheræ* biloculares, incumbentes, versatiles, pollen farinaceum aureum turgentes. *Ovarium* trigonum, virens, triloculare : *ovulis* confertis, biserialibus. *Stylus* filiformis, glaber, apice triqueter. *Stigma* exsertum, levissimè trilobum, disco concaviusculum, minutè papillosum, atropurpureum. *Capsula* trilocularis, polysperma, loculicido-dehiscens. *Semina* semiorbicularia, biserialia, complanata, submembranacea, cinerea, margine exteriori plano. *D. Don Mss.*

One of the forms of *Phycella ignea*, of which there appears to be several in the gardens, differing in the breadth, and more or less intense green of their foliage, in the size and colour of the flower, and in the length of the staminal processes, which, in the present subject, are six in number, alternating with the stamens, and evidently originating from the confluent basis of the filaments. Whether the *Amaryllis cyrtanthoides* of the Botanical Magazine, is really distinct, or merely another form of the present species, I have not been able to satisfy myself. At Mr. Knight's Nursery, King's-road, Chelsea, are five or six forms differing in the particulars before-mentioned ; but as the genus requires a thorough revision, we shall leave the subject in the hands of Mr. Herbert, than whom no one is better able to clear up doubts of this nature.

The present is a native of the vicinity of Valparaiso, in Chile, and was introduced to the Botanical Garden, Chelsea, by Miss Reinagle, whose valuable favours we have had already frequent occasion to mention. It thrives freely in a light rich earth, and, in other respects, will require the same treatment as other half-hardy bulbous plants. Our drawing was taken from a plant, which blossomed at the Chelsea Garden, in October last.

The name is derived from *φυκος*, a kind of purple pigment, and applied to this genus of plants, from the prevailing red colour of their flowers. *D. Don Mss.*



1. Portion of the tube of the Perianth laid open, to show the Stamens and Processes.
2. Pistil.



F.D. Smith del

Pub. by J. B. Baughman, D. C. 1881.

STREPTANTHERA cuprea.

Copper-coloured Streptanthera.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

STREPTANTHERA. *Spatha* bivalvis, membranacea, sublacera, arido-sphacelata. *Perianthium* 6-partitum, corollaceum: *tubo* brevissimo: *limbo* regulari rotato. *Stamina* 3, *tubo* inserta: *filamentis* erectis: *antheræ* tortæ *style* incluse. *Stigmata* 3, dilatata, biloba, fimbriata. *Semina* globosa. *Swt. br. fl. gard. ser.* 1. fol. et t. 209.

S. cuprea, foliis ensiformibus acutis striatis medio excisis, scapo 2-4-florò, perianthii laciniis ovatis obtusis carinatis supra basin intus bimaculatis. *Streptanthera cuprea.* *Swt. hort. brit. edit.* 2. p. 501.

Stem about a span high, leafy below, producing 2 or 3 scapes. *Leaves* distichous, sword-shaped, acute, mucronate, the mucrone bent a little on one side, ribbed up the centre on both sides, and striated with numerous prominent longitudinal lines, cut in from about the middle downwards; lower ones smallest, but of the same form; those on the scape sheathing the stem a great part of their length. *Scape* smooth, somewhat flexuose, 2 to 4-flowered. *Spathe* 2-valved, membranaceous, jagged a little at the point, the segments generally terminated in an acute point; outer one largest, marked with numerous reddish brown lines and patches; the inner ones bifid at the end. *Perianthium* 6-parted, petal-like: *tube* short and slender, purple: *segments of the limb* deeply parted, spreading widely open when expanded, closely imbricate, ovate, blunt at the ends, keeled down the back; the outer ones with the strongest keel, of a yellowish copper colour, purple at the base, and bearing a pale yellow spot on each side. *Stamens* 3, inserted in the mouth of the tube: *filaments*

smooth, triangular, inserted into the back of the anthers, a little above the base: *anthers* linear, twisted round each other, 2-lobed, opening in front for the exclusion of the pollen: *pollen* dark purple or velvet. *Ovarium* 6-angled, also a little twisted: *ovula* kidney-formed. *Style* smooth, red upwards, inclosed by the stamens. *Stigma* 3-cleft, the segments broadly dilated at the ends, deeply channelled on the upper side, having the appearance of 2 lobes; the edges beautifully fringed, so as to give it, with its hollow surface, the exact resemblance of a leaf of *Dionæa muscipula*; has it not the same uses?

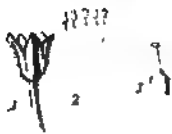
This elegant species was introduced by Mr. Synnot, from the Cape of Good Hope. It requires a light loam, and in other respects to be treated as other Cape *Irideæ*. It may be planted in a border in front of a Stove or Greenhouse, or other sheltered situation, where it blossoms freely.

Drawn from a specimen which flowered at Mr. Colvill's Nursery.

The generic name is derived from στρεπτός, twisted, and ανθηρα, anther, in allusion to the twisted nature of the anthers.



1. Stamens. 2. Style and Stigmas.



E. m. 1st ed.

Pub by J. Ridgway Dec 1891

PRIMULA ciliata.*Fringed Primrose.**Natural Order.* PRIMULACEÆ. *Brown prodr.* 427.*PRIMULA.* Supra fol. 5. series 2.

P. *ciliata*, foliis obovato-cuneiformibus grossè crenato-serratis villosulis subviscosis opacis, scapo angulato plurifloro, calycibus campanulatis angulatis ciliatis tubo corollæ ferè triplò brevioribus.

Primula ciliata. *Ram. et Schult. syst.* 4. p. 148. *Spreng. syst.* 1. p. 574. *Lehm. monog. prim.* p. 79. *Schrank prim. fl. salisb. n.* 186. *Brown. fl. salisb.* 1. p. 162. *Suter fl. helv.* 1. p. 112. *Schleich. cent.* 1. pl. var. n. 16.

Root-stalk about the thickness of a finger, hard, and of rather a woody texture, clothed with brown lanceolate scales. *Branches* several, short, crowded with leaves. *Leaves* obovate or broadly wedge-shaped, rather succulent, bluntly rounded, deeply notched and toothed, or serrate, with sharpish teeth, about 10 on each side of the leaf, opaque, slightly viscous, and clothed on both sides with very short hairs, the margins fringed with short hairs that are tipped with a small globular gland, attenuated rather abruptly down the footstalk. *Petioles* broad and flat. *Scape* short, not much above half the length of the leaves, slightly angular, pubescent. *Umbels* several-flowered, varying according to the strength of the plant. *Involucre* of several very short bluntly rounded bractes, fringed with short hairs, and viscous. *Pedicles* slender, erect, variable in length, densely clothed with short hairs, that are all tipped with a small globular gland. *Calyx* short, campanulate, angular, pubescent, about one third shorter than the tube of the corolla: *lobes* blunt, spreading, fringed. *Corolla* pale flesh-coloured; *tube* slender, smooth, swollen where the stamens are inserted; *mouth* white, clothed with short villous down: *limb* spreading, flat: *seg-*

ments 5, distinct, deeply cleft, obcordate. *Stamens* 5, inserted in the tube a little below the mouth, and included: *filaments* very short. *Germen* nearly globular, smooth, scarcely the length of the calyx. *Style* short, smooth. *Stigma* large, capitate.

Nearly related to *P. villosa*, from which it is distinguished by the shorter and more coarsely serrated leaves, by its angular stalk, and, finally, by the tube of the corolla being quite smooth, and the wider calyx. A light loam suits it well; and the plant is readily increased by parting. It is admirably adapted for the rock-work, where its showy and early blossoms, being one of the earliest of the Auricula tribe, cannot fail to attract notice in the Spring. Our drawing was taken from a plant in Mr. Colvill's Nursery, King's-road, Chelsea.

The generic name is derived from *primus*, first; hence the name primrose, applied to *P. vulgaris*, from its being the earliest of the Spring flowers.



1. The Calyx. 2. The tube of the Corolla laid open, to show the insertion of the stamens. 3. The Pistil.



P. Smith. del

Pub. by J. Ridgway Dec 1837

LEUCOCÁRPUS alatus.

Winged-stalked Leucocarpus.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 433. Trib. 3.

GRATIOLÆ. D. Don Mss.

LEUCOCARPUS. *Calyx* campanulatus, 5-dentatus. *Corolla* tubulosa, ringens, limbo 5-loba, bilabiata. *Stamina* 4, didynama, fertilia. *Stigma* bilamellosum. *Bacca* bilocularis, polysperma. D. Don Mss.

Calyx campanulatus, 5-dentatus, demùm, augeſcenti bacca, rumpens, costis 5 elevatis hinc 5-angularis: *dentibus* conduplicatis, acuminatis, recurvis, subæqualibus. *Corolla* tubulosa, ringens: *fauce* plicis 2, elevatis, barbata: *limbo* 5-loba, bilabiata: *lobis* subrotundis, margine revolutis, suturatione imbricatis. *Stamina* 4, didynama, fertilia; *duo superiora* breviora! *filamenta* glabra, subarcuata, infernè corollæ tubo connata: *antherarum lobis* divaricatis, connectivo hemisphærico insertis, suturâ longitudinali dehiscentibus. *Pollen* farinaceum. *Ovarium* biloculare. *Stylus* filiformis, glaber. *Stigma* bilamelloſo-partitum: *lobis* ovatis, leviter acuminatis, undulatis, suprâ copiosè minutèque papilloſis. *Bacca* subrotunda, spongiosa, succulenta, bilocularis, indehiscens (deliquescent?) polysperma, basi styli remanenti mucronulata. *Placentæ* 2, magnæ, succulentæ, septo (facie cauli oppositâ) contrario infixæ, marginibus revolutis. *Semina* unicâ serie creberrima, nec cumulata, ovali-oblonga, fulvescentia: *testa* subcrustacea, extûs reticulato-rugosa, vix scrobiculata: *chalazâ* et *umbilico* (punctus prominulis) nigricantibus, consimilibus: *albumen* copiosum, carnosum. *Embryo* erectus. *Radicula* vaga.

Herba erecta, ramosa, glabra, virens, cubitalis v. tripedalis. Radix fibrosa, annua? Caulis et rami quadrangulares, angulis acutis, alatis. Folia opposita, amplexicaulia, lanceolata, acuminata, argutè serrata, membranacea, suprâ leviter rugoso-venosa, subtûs varicosa, pallidiora, infernè angustata, margine basin versus revoluta, ac integerrima, subinde, basibus auriculatis approximatis subperfoliata, palmaria v. spithamæa, nunc dodrantalia. Flores axillares, cymosi. Cymæ plerumque bis trifidæ, multifloræ, rarò trifloræ, flore intermedio semper solitario, cæteris ternis septennatisve. Pedunculi 4-angulares, foliis plurimùm (5-plò) breviores. Bracteolæ subulatæ, adpressæ, glabræ. Corolla sulphurea, vix uncialis. Bacca alba, symphoricarpo racemoso magnitudine et colore adsimilis, sapore amaro et dulci nauseabunda. D. Don Mss.

Leucocarpus alatus. D. Don Mss.

Conoclea alata. Graham in Edinb. New Phil. Journ. Oct. 1830.

Mimulus perfoliatus. Kunth in Nov. Gen. 2. p. 371? Synop. 2. p. 128? Graham in Bot. Mag. t. 3067.

Discovered by Messieurs Schiede and Deppe, by the sides of streams, at Cuesta Grande de Chiconquiera, in the Province of Vera Cruz, Mexico, bearing fruit in September; and from seeds, picked from specimens transmitted by these gentlemen to Mr. Lambert, in the beginning of last year, plants were raised which blossomed the following Summer, along with the beautiful *Lophospermum erubescens*, introduced at the same time, and already figured at TAB. 68. of this work. Our drawing was taken from the collection of Whitley, Brames, and Milne, at Fulham. The plant thrives well in the open border, where it ripens its seeds in abundance.

This plant, which is, perhaps, not different from M. Kunth's *Mimulus perfoliatus*, agrees so entirely with *Mimulus*, both in general appearance, and in the form and structure of its flower, that, without the fruit, the propriety of referring it to that genus, could not be questioned; but its fruit being once seen, it will be evident that the plant can neither be referred to *Mimulus*, nor to any other genus hitherto established among the *Scrophularinæ*. In its fruit, *Leucocarpus* comes near to *Fieldia* and *Cyrtandra*, which of themselves are scarcely different from *Columnnea*, of which *Mitraria* of Cavanilles, is a species. I had, formerly, (Edinb. Phil. Journ. v. 7. p. 83. and Prod. fl. Nepal. p. 121.) proposed to separate *Didymocarpus*, and certain other genera akin to it, into a distinct family; but a more accurate examination has fully convinced me that they must be united to the *Gesneriaceæ*, which again are hardly distinguishable by any tangible character from the *Scrophularinæ*. They may, however, be considered as forming a distinct group, connecting the latter with *Acanthaceæ*, to which they approach, in their seeds being furnished with umbilical cords, by which they are attached to the placata, and in the frequent absence of albumen; but which, in such minute seeds, is liable to be overlooked, or confounded with the testa, to which it closely adheres. Gærtner is, therefore, perfectly correct, in attributing to *Cyrtandra* albuminous seeds, although his plate represents that substance as too copious. The radicle always points towards the hilum; and Roxburgh, and myself, have erred in describing the embryo as inverted, for its situation does not really differ from *Scrophularinæ*.

The name is derived from λευκος, white, and καρπος, fruit.
D. Don Mss.



1. Calyx. 2. Corolla laid open, to show the stamens. 3. Pistil. 4. Longitudinal section of the berry. 5. Transverse section of ditto.



53. $\frac{1}{2} \pi$ and $\frac{3}{2} \pi$ are the

Pub. by S. H. Young, June 1902

[illegible]

OXALIS crenata.

Crenate-petalled Wood-sorrel.

Linnean Class and Order. DECANDRIA PENTAGYNIA.

Natural Order. OXALIDÆ. DC. *prodr.* 1. p. 680.

OXALIS. *Calyx* profundè 5-partitus. *Petala* 5. *Stamina* definitè numerosa (10 v. 20); *extimis* 5 plerumque rudimentariis. *Filamenta* basi connata. *Styli* 5.—*Herbæ* (plerumque utriusque orbis zonis temperatis propriæ) sæpius perennes, humillimæ. *Folia* petiolata, ternata, digitata, aut simplicia. *Flores* pedunculati, solitarii v. plures umbellati; in capensibus sæpius rubri; in americanis lutei. D. Don *Mss.*

O. crenata, caulescens, erecta; foliis ternatis: foliolis obcordatis, floribus umbellatis, petalis crenatis, radice tuberosâ. D. Don *Mss.*

Oxalis crenata. Jacq. *oxal.* p. 7. Willd. *sp. pl.* 2. p. 799. Persoon *syn.* 1. p. 518. Spreng. *yst.* 2. p. 429. DC. *prodr.* 1. p. 601. G. Don *yst. gard. and bot.* 1. p. 756.

O. Arracacha. G. Don *l. c.* 1. p. 756.

Oxis lutea, annua, floribus dentatis. Feuill. *peruv.* p. 49. t. 24.

Radix more *Solani tuberosi* tuberosa: *tuberibus* oblongis, succulentis, magnitudine *ovii columbini*, lutescentibus, funiculo fusiformi deperescenti connexis, è squamis (foliorum primordiis) carnosis, magnis, confluentibus compositis, superficie inæqualibus, sæpè tuberculatis, sapore herbaceo, parùm acido. *Caulis* erectus, ramosus, teres, carnosus, crassitie digiti minoris, bi v. tripedalis, pilis mollibus parcè instructus, apicem versus subangulatus. *Rami* ad insertionem sæpè sanguinolenti. *Folia* alterna, longè petiolata, ternata: *foliolis* obcordatis, brevissimè stipitatis, pendulis, suprâ glabriusculis, subtùs pallidioribus, copiosè pilosis, semipollicaribus; *duobus lateralibus* basi obliquis: *stipitibus* brevissimis, crassis, geniculatis, barbatis. *Petioles* semiteretes, glabriusculi, suprâ planiusculi, lineâ depressâ angustâ exarati, basi geniculati. *Stipulæ* adnatæ, decurrentes, tenuissimè membranaceæ, ciliatæ, pellucidæ, apicibus liberis, acutis. *Pedunculi* axillares, filiformes, 6-unciales, pluri (4-7)-flori, parcè adpressèque villosi. *Pedicelli* filiformes, vix pollicares. *Bracteolæ* lineari-lanceolatæ, acuminatæ, villosæ, subitè marcescentes. *Flores* erecti, campanulati. *Calyx* profundè 5-partitus, quandoque 6-partitus: *segmentis* lanceolatis, obtusis, adpressè villosis, basi invicem se imbricatis, striatis, margine membranaceo albo; *interioribus* parùm angustioribus. *Corolla* campanulata, aurea, calyce duplò longior, 5-petala, nunc 6-petala: *petalis* obovatis, unguiculatis, 5-nerviis, subbilobis, margine inæqualiter crenatis, crispatis, involutis: *unguibus* supernè bicallosis, sæpè connexis, imâ basi angustatis: *nervis* ramosis, sanguineis; *lateralibus* 2 basi connatis. *Stamina* 15 -20! *interiora* 5 v. 6 duplò longiora; *exteriorum* alternis rudimentariis. *Filamenta* subulata, leviter compressa et pilosa, basi connata, atque subinde monadelphia. *Anthera* aureæ, incumbentes, biloculares. *Pistilla* 5 v. 6, in circulum digesta. *Ovaria* (folliculi) compressa, glabra, unilocularia, in capsulam 5-6-locularem connata: *ovulis* suturæ interiori insertis. *Styli* pilosi. *Stigmata* biloba! *lobis* dilatatis, copiosè papillosis. *Capsula matura* mihi nondùm visa. D. Don *Mss.*

This plant, remarkable for the singular enlargement of its subterraneous stems, which exactly resemble the tubers of the potatoe, appears to be what is termed a progressive annual. The flowering stems die annually, root and all, when the tubers are found entirely separate, with a portion of the filiform attachment adhering to them; by those the plant usually appears to increase itself, for it rarely, if ever, perfects seeds, at least in this country, the colder climate of which may favour the production of tubers, as Feuillée, whose description and figure is otherwise accurate, seems not to have been aware of this singular part of its economy. The tubers are produced in considerable plenty, and are often two inches long, with an inch in diameter. When raw they are slightly sub-acid, but on being boiled they lose it entirely, and taste very much like the potatoe, for which they might form occasionally an agreeable substitute at the tables of the curious. Something of the same sort of tuber is found in the common wood-sorrel, but there the fleshy bases of the rudimentary leaves are distinct, and not confluent, as in our plant. It is a native of Peru, and is cultivated abundantly in the gardens about Lima, as a salad, for which purpose its succulent stems, and acid flavour, seem strongly to recommend it. It grows freely in the open border, and is readily increased by cuttings, as well as by the tubers, which require to be taken up and treated as potatoes.

The *Oxalideæ* are very properly placed by M. De Candolle between the *Geraniaceæ* and *Zygophylleæ*, to each of which they approach in many respects; and along with the *Rutaceæ*, they appear to form a very distinct natural class. The *arillus* in *Oxalideæ*, may be regarded as a sort of inner pericarpium, and analogous to that of *Geranium*, and others of the same family, wherein the pericarpium is reduced to its most simple form. I do not consider the *Ampelideæ*, or *Vitigineæ*, as belonging to this class, but as being closely allied to the *Araliaceæ*, next to which I have formerly placed them. I wish here to correct a grave error, into which I had fallen, (*Prodr. Fl. Nep. p. 186.*) in ascribing to the *Araliaceæ* “*semina erecta*,” instead of “*semina pendula*,” and although I have been long aware of the blunder, it is only now that I have had an opportunity of correcting it.

The generic name is derived from *οξύς*, *acid*, from the taste common to the leaves of this genus. *D. Don Mss.*



1. Calyx. 2. Stamens. 3. Pistils.



Viola 1861

Viola 1861

Viola 1861

VIOLA suavis.

Fragrant Violet.

Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. VIOLARIEÆ. DC. *prodr. syst. n. t. 1. p. 287.*

VIOLA. Capsulis turgido-subrotundis, caulibus subnullis. DC. *loc. cit.* Calycis sepala inæqualia, omnia plus minus deorsum in appendices auriculæformes (è dilatationibus nervorum prodeuntes) producta, post anthesin erecta. Petala inæqualia, æstivatione convolutivâ, ungue triservi; inferius deorsum in calcar cavum plus minus productum. Stamina approximata aut coarctata (nec coalita) ad apicem dentium tori pentagoni 5-dentati inserta. Filamenta basi dilatata oblonga vel triangularia, antheras demissius gerentia; lobi antherarum basi divergentes, stamina 2 anteriora dorso appendices varias nectariferas in calcar intrantes gerentia. Ovarium nunc superum, nunc basi toro concavo ciuctum et idè semi-inferum. *Valvule capsule* elasticæ post maturationem contractæ semina ejicientes; *semina* horizontalia manifestè carunculata, plus minus ovoidea et nitida. Embryo oblongus, radícula teretiuscula, cotyledones sæpius oblongo-orbiculatae planiusculæ radiculâ vix longiores. — Herbae plerumque perennes, rarissimè annuæ, nunc caule brevissimo vel subterraneo, unde acaules dictæ, nunc caulescentes vel suffrutices parvi; folia alterna marcescentia; pedunculi solitarii axillares uniflori, 2-bracteolati non articulati, apice reflexi; flores cernui; folia seminalia oblonga ovatave, petiolata; primordialia opposita, sed rarè coetanea. DC. *loc. cit. p. 291.*

Sect. I. NOMIMUM. Stigma rostratum, foraminulo ad extremitatem rostri sito; rostrum plus minus recurvum, nunc deorsum marginatum et tunc planiusculum et obliquum, nunc absque margine et tunc deorsum convexiusculum. Stylus ab apice ad basin attenuatus. Stamina oblonga approximata. Torus planiusculus. Capsula sæpius trigona. Semina 15-27. Folia seminalia sæpè obovata vel oblonga.

§. 2. *Stigmatibus convexis, deorsum immarginatis.*

V. suavis, acaulis, stolonifera, stigmate uncinato nudo, foliis reniformibus basi involutis rugosis dentato-crenatis pubescentibus, stipulis lanceolatis ciliatis apice longè attonuatis, sepalis oblongo-lanceolatis obtusis, petalis quobus superioribus oblongis obtusis infimo emarginato subduplò angustioribus.

Viola suavis. Marsch. à Bieb. *flor. taur. v. 3. suppl. p. 164.* Spreng. *syst. v. 1. p. 797.* Swt. *hort. brit. ed. 2. p. 44. n. 33.* G. Don *gen. syst. 1. p. 325.*

Perennial, herbaceous, producing numerous stems from the base and long stolones that run along the surface of the ground and throw up shoots at some distance. *Leaves* kidney-shaped, or some inclining to cordate, rounded at the

point, folded in on each side at the base, so as to make it appear hollow or cucullate, pennately nerved, and numerous veined, rugged, notched at the edges with numerous broad shallow notches, pubescent, of a pale green colour. *Petioles* rather long, flattened but prominently ribbed on the upper side, slightly winged by the sides, keeled underneath, clothed with a short close pubescence. *Stipules* long, lanceolate, tapering to a long slender point, fringed with long hairs. *Peduncle* quadrangular, channelled down the back, bearing a pair of opposite bractes about the middle. *Bractes* lanceolate, taper-pointed, and fringed like the stipules. *Flower* terminal, nodding, of a pale blue, white below the centre, delightfully fragrant. *Calyx* deeply 5-cleft, the segments oblong, obtuse. *Petals* 5, the upper part pale blue, the lower part white: two upper ones, and the side ones, oblong or cuneate obtuse; the lower one shorter, broader, and slightly retuse at the point. *Spur* about half the length of the calyx, hooked a little at the point. *Stamens* 5, the three upper ones sessile, the two lower ones on long crooked filaments that extend down the spur: anthers two-celled, with a brown membranaceous scale on their point. *Ovarium* pubescent. *Style* slender at the base, thickening upwards, bent at the point. *Stigma* hooked.

Our drawing of this interesting addition to our Sweet Violets, was taken at the Chelsea Botanical Garden, last Spring. Its flowers are very fragrant, and produced in great profusion; and the plant is readily increased by parting the roots, or by seeds. We observed what we considered the same species in the Nursery of Messrs. Allen and Rogers. It is a native of orchards in the Ukraine, and in hedge-rows about Charkow. Distinguished from *V. odorata* by its paler green herbage, and by its larger and paler flowers, with the four upper petals longer and narrower, and the lowermost broader and more distinctly emarginate. The *stipules* are also narrower.

Viola, *ἰον*, in Greek, was the favourite flower of the Athenians, and was our *V. odorata*. The name is of uncertain derivation, but it has given rise to the name of a peculiar colour, prevailing in the flowers of this genus.



1. Calyx. 2. Lower petal. 3. One of the upper petals. 4. One of the lateral ditto. 5. Stamens. 6. Pistil.



565m. 18. 24

Fig. by J. Douglas, Jan 1862

W. H. B.

DACTYLICAPNOS Thalictrifolia.

Berry-bearing Fumitory.

Linnean Class and Order. DIADELPHIA HEXANDRIA.
Natural Order. PAPAVERACEÆ. *Juss. gen.* 235. *Trib.* 2.
 FUMARIÆ. *D. Don Mss.*

DACTYLICAPNOS. *Petala* 4; 2 *exteriora* basi calcarata. *Bacca* unilocularis, polysperma. *D. Don Mss.*

Calyx 2-phyllus: *foliolis* cordatis, acutis, denticulatis, membranaceis, adpressis, caducis. *Petala* 4, coalita; 2 *exteriora* maxima, cymbiformia, substantiâ spongiosa, dorso carinata, carinâ basi apiceque productâ, saccatâ, hinc basi calcarata, inde apice galeata; 2 *interiora* opposita, unguiculata, ungue elongato capillari: *laminâ* obcordatâ, conduplicatâ, carinatâ, margine membranaceâ, basi emarginatâ, appendiculâ (carinæ apice) rotundatâ ventricosâ auctâ. *Stamina* in duas phalanges 6: *filamenta* membranacea, uninervia: *antheræ* per tria; *lateralibus* 2 unilocularibus; *intermediâ* biloculari. *Ovarium* ovato-oblongum, compressum, 1-loculare. *Stylus* ovario longior, ancipiti-compressum. *Stigma* compresso-planum, viride, quadratum, apice leviter emarginatum, marginibus lateralibus dilatatis, lineolâ elevatâ instructis, angulis tuberculiferis, tuberculis albis, inferioribus duplò majoribus. *Bacca* succulenta, unilocularis, polysperma. *Placentæ* 2, oppositæ, parietales, seminiferæ. *Semina* atra, subreniformia, lineolatim punctulata.

Herba (nepalensis) scandens, cirrhosa, lævis. Radix fibrosa, annua. Caulis teres, ramosus, punctis lineolisque purpurascentibus copiosè notatus. Folia alterna, petiolata, dichotoma: dichotomiis biternatis; alterâ cirrhiferâ: foliolis stipitatis, ovatis, acutis, membranaceis, trinerviis, suprâ viridibus opacis, subtùs glaucis, basi attenuatis, semuncialibus: nervis purpureis; lateralibus dichotomis; omnibus ramosis, reticulato-venosis. Cirrhi spirales, ter dichotomi, suprâ planiusculi, purpurascentes. Petioli et rachis communes purpureo-punctati, suprâ leviter canaliculati, subtùs convexi, basi paulatim dilatati. Racemi axillares pluri (5-9)-flori. Corolla sordidè lutea, apice atropurpurea, ultra semipollicem longa. Bacca dilutè violacea, fere uncialis. *D. Don Mss.*

Dactylicapnos thalictrifolia. Wall. *tent. fl. nepal.* p. 51. t. 39. *G. Don gen. syst. of gard. and bot.* 1. p. 141.

Delytra scandens. Don *prodr. fl. nepal.* p. 198.

Discovered by Dr. Wallich, on the mountains of Shiva-poorra, and at Naokote, in Nepal, where it flowers in May, and its fruit are ripe in August. With us the plant does not blossom until late in Autumn; it has much the air of *Adlumia fungosa*, but its fruit being a berry, essentially distinguish it as a genus, which, on this account, forms a remarkable exception in the order. An approach to the berried fruit may be remarked in *Fumaria*, as the genus is now limited, whose monospermous capsule is almost a drupe, as in *Crambe*, and certain other *Cruciferae*, but which is still more distinctly exemplified in *Monnina*, belonging to the order *Polygaleae*, which I have formerly (*Prodr. Fl. Nepal. p. 199.*) proposed to place between the *Cruciferae* and *Papaveraceae*, and to which they appear to me to be closely related. I have always regarded, with Jussieu, the *Fumariaceae* as constituting nothing more than a section of *Papaveraceae*, and having again carefully considered the subject, I see still stronger reasons for adhering to my former view. The genus *Hypecoum*, whose stamina are definite, and where the petals are also considerably modified, almost as much so, even as in *Fumariaceae*, appears clearly to connect the two groups together.

Our drawing was taken from the collection of Messrs. Whitley, Brames, and Milne, at Fulham. It is a hardy annual, and is propagated by seeds.

The generic name is derived from δακτυλος, a finger, and κάρνος, fumitory, and has been so named by Dr. Wallich, from the form of its nearly cylindrical berries, almost an inch long. *D. Don Mss.*



1. Leaf of the Calyx. 2. Exterior petal with 3 of the Stamens. 3. Inner Petal. 4. Bundle of Stamens. 5. Ovary, surmounted by the style and stigma. 6. Transverse section of the same, showing the insertion of the seeds.



S. D. Smith del.

Reddy Redgery Jan. 1866.

RHODODÉNDRON indicum.

var. *ignescens*.

Fiery Indian Rhododendron.

Linnean Class and Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICÆÆ. *D. Don prodr. flor. nep.* p. 148.

Subordo III. RHODORACÆÆ. *D. Don loc. cit.* p. 162.

RHODODENDRON. *Supra fol. 10. series 2.*

Sect. III. TSUTSUSI. *Calyx* 5-partitus: segmentis longis, erectis, angustis, acutis. *Corolla* tubulosa, rotata, 5-partita: segmentis patentibus. *Stamina* 10, inæqualia, adscendentia aut suberecta.—*Frutices* erecti aut patentes ramosi, sempervirentes aut subdecidui: ramis virgatis, junioribus pilosis. *Folia* hirsuto-strigosa. *Flores* terminales subsolitarii aut gemini.

R. indicum, floribus terminalibus solitariis aut geminis, ramis strigosis, foliis elliptico-lanceolatis basi et apice attenuatis strigosis, dentibus calycinis elongato-lanceolatis ciliatis patentibus.

Azalea indica. *Linn. sp. pl.* p. 214. *Willd. sp. pl.* 1. p. 831. *Hort. Kew. edit. 2. vol. 1.* p. 318. *Pers. syn. 1.* p. 312. *Ram. et Schult. syst. 4.* p. 374. *Spreng. syst. 1.* p. 628.

Chamærhododendron exoticum, amplissimis floribus liliaceis. *Breyn. prodr. 1.* p. 23. *prodr. 2.* p. 31. *ejusdem edit. alt.* p. 16 et 53.

Cistus indicus Ledi alpini folio, floribus amplis. *Herm. Lugdb.* 152. t. 153. *Raj. hist.* 1895.

TSUTSUSI. *Kämpf. Amœn.* 845. t. 846.

α *puniceum*. Red-flowered. *Botan. magaz. t.* 1480.

β *ignescens*, segmentis 4 inferioribus flammeis unicoloribus: superioribus sublilacinis obsolete punctatis. *Supra tab.*

γ *phaniceum*. Purple-flowered. *Botan. magaz. t.* 2667.

δ *purpureum*. Double purple. *Botan. magaz. t.* 2509.

ε *luteum*. Double yellow.

Stems numerous, slender, very much branched, spreading, strigose, or thickly clothed with brown prostrate hairs. *Leaves* of a thin weak texture, alternate or scattered, in clusters near the end of the branches, elliptic or elliptical lanceolate, tapering to both ends, terminating in a shortish, horny, bluntish mucro at the point: strigosely hairy, the hairs procumbent, and giving the foliage a brown appearance. *Petioles* dilated a little at the base, flat on the upper side, and rounded below, densely clothed with close-

pressed rusty hairs. *Flowers* terminal, solitary, or in pairs. *Peduncles* short, thickly covered with close-pressed hairs. *Calyx* deeply 5-cleft: the segments elongately lanceolate, sharp-pointed, attenuated to the point, spreading or slightly reflexed when the flower is expanded, clothed with close-pressed hairs, and fringed with long spreading ones. *Corolla* shortly tubular, bluntly 5-angular and 5-furrowed, rotate, deeply 5-parted, spreading, flame-coloured: segments nearly equal, ovate, furrowed on the upper side; the two lower ones more deeply divided: upper one rather smallest, tinged with lilac, and inconspicuously spotted. *Stamens* 10, short, nearly erect: *filaments* red, hairy about half way up, the upper part smooth, slender: *anthers* 2 lobed, attached by their back to the filaments, bursting at the point for the exclusion of the pollen: *pollen* white, stringy. *Ovarium* densely clothed with long white close-pressed hairs. *Style* smooth, bearing a few hairs near the base, bright red, very long, exserted a great way beyond the stamens. *Stigma* capitate, slightly lobulate, with a pit in the centre.

This splendid variety was imported by Mr. Tate, in the Honourable East India Company's Ship Orwell, from China. It differs from the old variety in being much more branched, with the branches more slender and spreading, instead of upright. The flowers are much more abundant, and scarcely more than half the size, and of a brighter crimson. It ought to be planted in peat near a south wall, or other warm sheltered situation, and ought to be protected by a mat in frosty weather. The generic name is already explained at *folio* 117.



1. Calyx. 2. Two of the Stamens. 3. Pistil.



1. *D. Smith. 1881.*

Pub. by J. H. Rogers. Feb. 1881.

LACHENALIA mutabilis.

Changeable-coloured Lachenalia.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. p. 274.

Div. 111. Flores spicati. Radix bulbosa. Perianthium basi tubulosum.

LACHENALIA. Perianthium inferum, sexdivisum, oblato v. cylindrico-campanulatum : segmentis 3 exterioribus brevioribus oblongis calycino-conniventibus carunculâ externâ infra apicem : interioribus 3 alternis supra rotundato-dilatatis patulis. Filamenta basi laciniarum perianthii inserta, subassurgentia : antheræ incumbentes. Stylus subassurgentèr porrectus. Stigma simplex. Capsula membranosa, subtrilobo-trigona, 3-locularis, 3-valvis : valvis medio septiferis. Semina biseriata, plura in loculo globosa. — Bulbus tunicatus ; folia 1-plurima, ambientia, subcarnosa, tenera, lineari ad lato-ovata. Scapus carnosus. Flores erecto-spicati v. racemosi, undique sparsi. *Swt. brit. flor. gar. series* 1. v. 2. t. 179.

L. mutabilis, foliis oblongo-lanceolatis acutis canaliculatis glabris margine undulatis, floribus subsessilibus horizontalibus urceolato-campanulatis ; bracteis minimis acuminatis basi dilatatis, staminibus sub-inclisis stylo subæquantibus.

Lachenalia mutabilis. *Swt. hort. brit.* p. 420. n. 39. *Edit.* 2. p. 529. *Lodd. bot. cab.* t. 1076. *Colv. catal. edit.* 3. p. 20. col. 3.

Root a tunicated bulb, producing numerous small white fibres at the base. *Leaves* generally two, sometimes only one, at first erect or ascending, but becoming horizontally spreading, with the points reflexed or revolute, about nine inches in length, and nearly one in breadth at the base, convolutely sheathing the scape, oblongly lanceolate, acute, channelled, rather succulent, smooth and glossy, the margins more or less undulate, spotted with purple underneath near the base. *Scape* about the length of, or scarcely so long as the leaves, succulent, cylindrical at the base, and bluntly angular in the flowering part, glaucous, the upper part of a brilliant light blue. *Flowers* numerous, crowded, horizontally spreading, sessile, or scarcely with a footstalk. *Bractes* very small, taper-pointed, broader at the base. *Perianthium* between bell-shaped and pitcher-shaped, about one third of an inch in length, 6-parted : 3 *outer segments* erect, calyx-like, equal in size, about one third shorter than the inner ones,

succulent, obtuse, bluntly keeled at the back, of a greenish yellow with brown points: *inner ones* petal-like, spathulate, spreading at the points, of a light yellow with an elegant brownish purple spot, a little below the point, one of them rather narrower, with a shallow notch at the end: *upper flowers* as well as the scape of a brilliant light blue before expansion. *Stamens* 6, inserted in the base of the segments: *filaments* smooth, ascending, about the length of the outer segments, attached to the back of the anthers: *pollen* yellow. *Ovarium* smooth, green, oblong, six-furrowed. *Style* smooth, about the length of the stamens, the point ascending. *Stigma* a small simple point.

Our drawing of this curious species, was taken from bulbs that flowered at the Nursery of Mr. Colvill, at Chelsea, and were imported from the Cape by Mr. Synnot, at the same time as the numerous other rare Cape bulbs, that were introduced by him, several of which we have already published in our preceding Numbers.

The present genus contains numerous handsome species, but a great many of them frequently disappear from the different collections; we believe the reason of this is chiefly owing to the bulbs being exposed to the heavy rains after flowering, and being grown in pots they sometimes become sodden; and as the bulbs are very succulent, and scarcely any of them being covered with a dry scaly bark for protection, (so different from most other bulbs,) this causes them frequently to rot: the better method of treatment would be to take them out of the ground as soon as they have lost their foliage, and keep them dry in as cool a place as possible, that they may not begin to grow too soon; by this mode of treatment they may be either planted in a warm border in Spring, or in pots in a frame or greenhouse: we have always observed that dry imported roots from the Cape, flower much finer, than ever they do after.

The generic name was given in compliment to Wernerus De Lachenal, of Switzerland, who published some observations on medical botany at Basle, in 1776.



1. Flower laid open, to show the insertion of the Stamens, and unequal segments of the Perianthium. 2. Ovarium terminated by the Style and minute Stigma.



CALCEOLARIA Wheeleri.

Wheeler's hybrid Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

Sect. 2. *Stamina* (2) *antherifera.*

CALCEOLARIA. *Calyx* quadrilobus v. quadripartitus. *Corolla* tubo brevissimo, limbo bilabiato; supra minora, infra magno inflato concavo calceiforme inflexo et in tubi faucem prono. *Stamina* 2. *Antheræ* loculis divaricatis, altero substerili. *Capsula* conica semibivalvis, valvulis bifidis. — *Herbæ* aut suffrutescentes, perennis aut annuæ; foliis plurimis oppositis raro alternis; pedunculi uni aut multiflori, axillares, paniculati aut corymbosi terminales; paucis folia radicalia, scapi 1-2-flori.

C. Wheeleri, herbacea, foliis venoso-rugosis hispido-scabris: inferioribus oblongo-ovatis obtusiusculis, serrato-dentatis basi attenuatis; caulinis subintegerrimis, corymbis terminalibus compositis patentibus multifloris, segmentis calycis latè ovatis obtusiusculis.

A perennial herbaceous plant. *Leaves* oblongly ovate, bluntish, much veined and rugose, hispidly hairy: lower ones attenuated towards the base, where they are entire; the upper part deeply jagged, serrately toothed, spreading: stem ones opposite, entire, or the lower ones slightly toothed. *Stem* erect, very hairy. *Corymbs* erect, divided. *Peduncles* and *pedicles* hispidly hairy, as is also the calyx. *Calyx* deeply 4-lobed: segments broadly ovate, bluntish. *Flowers* large, of a brilliant purple, much inflated: upper lip small: lower one large, rounded, attenuated inwards. *Stamens* 2, lobes divaricate. *Capsule* conical, hispid. *Style* slender, upright, tipped by a small stigma.

For the opportunity afforded us of giving a figure of this handsome plant, we are obliged to Mr. G. Wheeler, Nurseryman, at Warminster, who sent us a plant in full flower, from his extensive collection, the latter end of May last; it surpasses all the purple ones that we have yet seen; his account of it to us was, that it is a double hybrid, raised from

the seed of a hybrid that was produced from *C. purpurea*, fertilized with *C. corymbosa*, this was again fertilized by *C. purpurea*, which has brought it a stage back again. The seed had been sown early in 1831, and flowered in May, so that it is likely to be a very free bloomer, and was, at the time when in our possession, seeding freely itself, as may be seen from our figure. Mr. W. informs us, that he has raised several other very handsome hybrids from the same parent, very different from the present ; it appears that there will soon be as many hybrids in the present genus, as there is in Geraniaceæ. The whole or the greater part of the herbaceous species will bear our winters in a warm border, and if a collection of them were planted together, with a flower pot placed over each in severe frost or very wet weather, and single mats thrown over the pots, they would thrive well, and make a fine appearance in Spring and Summer ; and such a Winter as the present has been, many would stand well without the least protection : when the weather is fine and mild, the pots and mats must be all removed, to give them light and air, and even when frosty, if the sun shines warm on them.

The generic name is derived from *calceolus*, a slipper or small shoe.



1. Calyx. 2. Corolla laid open, to show the hollowness of the under lip, and the insertion of the stamens in the upper one. 3. Ovarium terminated by the Style and small Stigma.

NOTE.—We notice several typographical, and a few other errors, in some of the late Numbers, which have unavoidably been looked over since we have been from home ; those will be all corrected in an early Number.



F.D. Foster del

Paint by J. Rodgway Feb 1832

SPARÁXIS lineàta.

Red-lined Sparaxis.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. Brown prodr. 1. p. 302.

SPARAXIS. *Inflorescentia* disticho-spicata, alterna, remotius seorsim bivalvi spathacea; *spatha* membranacea ampliuscula aristato-lacera plerumque arido-sphacelata. *Perianthium* petaloideum, superum, erectum, infundibuliformi-patens, tubuloso-sexfidum: tubus gracilis brevior; limbus sex-partitus amplius regularis aequalis stellato-turbinatove explanatus. *Stamina* tubo adnata, inclusa, collateraliter-inflexa, recto-inclinata, nunc adscendentia, rarius trifaria erecta. *Antheræ* lineares, a dorso appensæ. *Stylus* gracilis, directione staminum. *Stigmata* 3, angustius lineari-complicata, recurvato-divergentia. *Capoula* membranacea oblonga, rotundate trigona, torulosa; trilocularis, trivalvis; valvis septigeris. *Semina* biserialia, plurima, subglobosa.—*Bulbo-tuber ovatum reticulis multiplicibus tenuibus (externis sericeo-fibrosis) vestitum*; folia 4-10 collateraliter-disticha, ensata, dense-striatula, latitudine bilineari ad uncialem, caulina sæpius in axillis bulbifera; caulis simplex vel paniculato-ramosus, truncatus ad orgyalem; flos raro unicus, sæpius in ramo pauci, ampli, speciosi, colore quam maxime tudentes; semina magnitudine fere *Sinapeos*. Swt. in *Supra folio* 160. series I.

S. lineata, caule erecto folioso dichotomo, scapis cylindricis glabris subtrifloris, foliis ensiformibus striatis acutis, spatha membranacea; laciniiis apice cuspidatis, perianthii segmentis erectis acutis subtus carinatis.

Root a bulb-tuber, clothed with a reticulated fibrous network, composed of the bases of the former decayed leaves. *Leaves* distichous, ensiform, acute, oblique from about the middle, from 4 lines to half an inch in breadth; from 5 to 8 inches in length. *Flower-stem* erect, leafy below, frequently forked. *Scapes* 2 to 4-flowered, cylindrical, smooth. *Spathes* scarcely an inch long, 2-valved; valves ovate, lacerate at the point, membranaceous, veined with chestnut-coloured veins: laciniaë cuspidate, or ending in slender points. *Perianthium* 6-parted; *tube* about 3 lines long: *throat* yellow: *segments* 6, erect, tapering to the base, acute, keeled at the back, and longitudinally marked with a red line, and more

or less tinged with pink, inside hollow, yellow at the base, marked about the middle with a brown mark, the upper part white. *Stamens* 3; *filaments* dilated below to about the middle. *Style* smooth, scarcely half the length of the limb. *Stigmas* 3, slender, spreading, dilated at the points, and fimbriate.

Our drawing of this pretty species of *Sparaxis*, was taken from a bulb at the Nursery of Mr. Colvill, King's Road, Chelsea, where several of them were in flower last Spring; it is a very pretty neat plant, and appears to be a very free bloomer. We cannot see any described species with which it agrees in any publication that we have examined.

The plant that produced the present specimen had only a simple scape, which was, most probably, the reason of its producing four flowers; they more frequently produce a forked scape, with three flowers on the middle one, and two on the side one: the bulbs were grown in a pit, and are covered with a mat in Winter. We find all the Cape, Mexican, and Chile bulbs, succeed quite as well in a warm dry border, in a mixture of sandy loam and peat, and to be covered with a mat in very wet or sharp frosty weather; or the bulbs may be taken up after flowering, and if kept in a cool dry place they may be kept out of the ground till early in Spring, when all the sharp frost is over: we have tried this plan, and find it succeed very well.

The generic name is derived from the Greek *σπαρᾶξω*, from its torn or lacerated spathes.



1. Bulb. 2. Corolla spread open, to show the filaments inserted near the base of the tube. 3. Style terminated by the 3 spreading fimbriate Stigmas.



P.D. Smith del.

Pub. by J. H. Rogers, Feb. 1852.

NARCISSUS stellaris.

Starry Narcissus.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEEÆ. *Brown prodr.* p. 296.

Sect. V. NARCISSINEÆ. *Radix* bulbosa. *Spatha* monophylla, 1-multiflora. *Perianthium* tubulosum, petaloideum, 6-partitum, coronatum.

NARCISSUS. *Spatha* 1-3-flora. *Perianthii* lacinia plus minus stellatus. *Corona* crassa brevi patellari segmentis multum breviori. *Filamenta* tubo adnata 3 inferiora cum antheris parum inclusa: et 3 etiam inclusa cum antheris semiexsertis. *Ovarium* triangularis trivalvis; valvis medio bisep-
tiferis; ovula numerosa bifariam producta.

N. stellaris, perianthii segmentis stellato-patentibus distinctis obovato-cuneatis mucronatis, corona perlutea patellari: margine plicato crenulato croceo intus albido, antheris omnibus subexsertis, foliis angusto-linearibus glaucescentibus obtusiusculis.

Narcissus stellaris. *Haworth in Swt. brit. flor. gar. no.* 26. vol. 1. at the end, June 1, 1831. *Narcissinearum monographia*, edit. 2. 1831.

Narcissus medio purpureus serotinus. *Park. parad. p.* 76. t. 76. f. 4.

Bulb rather small, ovate, tapering upwards, clothed with a brown membranaceous skin, which frequently more or less peels off. *Leaves* linear, bluntish at the point, glaucous, channelled on the upper side and keeled below, longitudinally striated with numerous prominent lines, more strongly keeled towards the base. *Scape* erect, slender, slightly compressed, acutely angled at the edges, faintly striated, very much tapering upwards. *Spathe* lanceolate, thinly membranaceous, longer than the peduncle, neatly striated, of a light straw colour. *Peduncle* nearly cylindrical, very obtusely angled, producing 2 or 3 shallow furrows. *Ovarium* below the flower, 3-celled, 3-valved, of a pale glossy green, each valve bearing 2 septums, on which two rows of crowded ovulæ are inserted; those are a little tapering to the base and rounded at the ends, of a glossy whiteness, shining like ivory. *Perianthium* petal-like: *tube* bluntly 4-angular, thick: *segments* spreading out like a star, quite distinct to the base, cuneately obovate, mucronate, tapering very much towards the base, longitudinally veined, the veins more or less branched. *Crown* very short, yellow at the base with a white ring a little

within the margin, which is somewhat plaited and crenate, and terminates in a margin of bright scarlet. *Stamens* 6, inserted in the mouth of the tube, the anthers all exerted, those are large, thick, and loaded with an amazing quantity of granular pollen. *Style* smooth, even with the anthers. *Stigma* 3-lobed, the lobes broadish and pustulate.

The present rare species of this pretty genus, which appears not to have been noticed before by any modern botanist, though well figured in *Parkinson's paradisus terrestris*, published in the year 1629: it must either have disappeared soon after, or has probably survived in some old gardens, where little notice has been taken of it; all the red or saffron edged species having been, in Linnæus's time, generally considered as the same, or nothing more than varieties of the same species: since that time, Mr. Curtis, Mr. Salisbury, Mr. Haworth, and Mr. Sabine, as private individuals, have paid great attention to this tribe, but no one has published any thing of consequence concerning them in this country, except Mr. Haworth. Some private individuals have also paid much attention to them within these few years, particularly the Reverend Mr. Ellicombe, of Bitton, near Bath, and Mr. Kent, who at one time had a fine collection of plants at Clapton, but now resides at Bathwick, Bath. Mr. Milne, at the Fulham Nursery, has also been collecting for some years all the species and varieties of *Narcissi* that he could procure, for his private collection, and has several scarce species; and Messrs. Young have a very good collection at their Nursery, at Epsom: there is also a large collection at the Horticultural Society's Garden at Chiswick.

In May last, we, in company with Mr. Haworth, saw in the Apothecaries Company's Garden at Chelsea, a few plants of the present species in flower, which Mr. H. immediately pronounced to be one figured in Parkinson's work; from those our drawing was made: the different species appear to thrive best in a sandy loam, and many will produce seeds; they may also be increased by offsets from the root.

For the explanation of the generic name, see folio 92, of the second series.



1. Tube spread open, to show the insertion of the Stamens. 2. Ovarium, terminated by the Style, and 3-lobed pustulose Stigma.



L. Smith del.

Pub. by J. B. Long, March 1861

W. H. K.

CAMELLIA japonica v. Sweetiana.

Sweet's painted-flowered Camellia.

Linnean Class and Order. MONADELPHIA POLYANDRIA.

Natural Order. CAMELLIÆ. *DC. prodr.* 1. p. 529.

CAMELLIA. *Supra folio* 2. *series* 2.

C. japonica, foliis ovatis acuminatis acutè serratis, floribus terminalibus subsolitariis. *DC. prodr.* 1. p. 529.

Camellia japonica. *Linn. spec.* 982. *Willd. sp. pl.* 3. p. 842. *Botan. magaz.* 42. *Andr. reposit.* 559.

Var. Sweetiana, foliis var. rubro-simplex subaffinis; petalis multiplicibus patentibus rubro et albo variegatis.

A beautiful upright, branching, evergreen Shrub, clothed with a glossy brown bark. *Leaves* ovately-oval, more or less acute; serratures pressed towards the margin, not of so dark a green as some varieties; and, at first sight, bearing a resemblance to the common single red, but of a larger size. *Petioles* hollowed a little on the upper side, and rounded on the lower, thickened towards the base. *Flower* bearing a strong resemblance to a beautiful variegated Rose, generally very double, more spreading than many varieties, and elegantly marked and variegated with white, blush, and a deep rosy red. *Calyx* imbricate: *outer sepals* composed of dry, brown, deciduous scales; inner ones of membranaceous tomentose ones, that are not quite so deciduous as the outer ones. *Petals* numerous, all slightly waved at the margins, and the inner ones somewhat crumpled, and narrower and smaller than the others; those on the outer circle being the broadest, irregularly variegated with whitish blush, and deep rosy red.

The present handsome variety of *Camellia*, we believe to be one of the most splendid that has ever been raised; at any rate, it is the finest that we have seen. It is of hybrid origin, the produce of the double striped, fertilized by the *Pompone* variety; the foliage partakes most of the latter variety, but larger, and the plant, if not seen in flower, might be mistaken for a strong growing single one.

This is another of the numerous hybrid varieties that we fertilized, and raised from seed, at the Nursery of the late Mr. Colvill, several years ago, but has now flowered for the first time; the plant is strong, and of a good size, so that young ones may soon be obtained from it.

The Camellia is now found to be as hardy, or even hardier than a Myrtle; such a Winter as the present has been, they would have stood well in the open air, without the least injury; and even the severest Winters, if planted near a wall, and protected by a mat. In the south and south-western parts of Britain, and some parts of South Wales, and Ireland, they will succeed well without any protection, they being more hardy than the common Bay-tree; and we expect soon to see many of the fine varieties cultivated in sheltered Shrubberies with the other evergreen shrubs, particularly as the nurseries are becoming overstocked with them, so that the early introduced ones may be obtained at a reasonable price.

We do not intend to publish many varieties of Camellia, only now and then, when a fine new one comes out like the present one, and which has not been published before.

For the derivation of the generic name, see folio 2, of the second series.

ERRATA.

Folio 112, overleaf, for *S. picta* and *S. atropurpurea*, read *S. straminea* and *S. atropurpurea*.

Folio 113, two lines from the bottom, for *Germen*, read *Ovarium*; the same overleaf.

Folio 114, in synonym, instead of *Hortulanorum*, read *Swt. hort. brit. ed. 2. p. 368*.

Folio 125, overleaf, line 17 from the bottom, for *Geraniaceæ*, read *Geraniaceæ*; and 6 lines below it, for *Vitigniæ*, read *Vitigineæ*.



F. J. Rodgny. March 1871.

TROPÆOLUM peregrinum.

Canary-Bird Flower.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. TROPÆOLEÆ. *Juss. mem. mus.* 3. p. 447. *DC. prod.* 1. p. 683.

TROPÆOLUM. *Calyx* 5-fidus, subbilabiatus; *labio superiore* basi calcarato. *Petala* plerumque 5, inæqualia; quandoque 2 v. nulla. *Stamina* 8, omninò libera. *Ovaria* 3, connata: *ovulis* solitariis, appensis. *Stylus* indivisus. *Stigma* trilobatum. *Carpella* 3, coalita, monosperma, suberosa. *Semen* exalbuminosum. *Radioula* minima.—*Herbæ* (Amer. Austr. inter grad. 10. et 37.) *plerumque scandentes*. *Folia alterna, petiolata, peltata, sæpiùs lobata*. *Petoli sæpiùs cirrhusi*. *Flores axillares, solitarii, pedunculati*. *D. Don Mss.*

T. peregrinum, foliis palmatis, petalis 2 superioribus maximis inciso-multifidis; cæteris 3 fimbriatis, calcare adunco. *D. Don Mss.*

Tropæolum peregrinum. *Linn. sp. pl. ed.* 1. p. 345. *ed.* 2. p. 490 *Syst. nat. ed.* 10. p. 998. *Jacq. schænb.* 1. t. 98. *Ruiz et Pavon fl. peruv. et chil.* 3. p. 76. *Bot. mag.* t. 1351. *Andr. rep.* t. 597. *Bot. reg.* t. 718. *Humb. Bonpl. et Kunth nov. gen. et sp.* 5. p. 252.

T. aduncum. *Smith tour.* 1. p. 158. *in Rees' cycl. in loco.* *DC. prod.* 1. p. 684. *G. Don syst. gard. et bot.* 1. p. 746.

Cardamindum quinquefido folio, vulgò *Malla. Feuill. peruv.* 2. p. 756. t. 42.

Herba odore et sapore omninò *Brassicæ oleraceæ*. *Radix* fibrosa, annua. *Caules* plures, scandentes, teretiusculi, glaberrimi, lævissimi, virides, ramosi, bi v. tripedales, et sæpè altiores. *Folia* alterna, petiolata, peltata, palmata, 5-7-loba, membranacea, venosa, glabra, subtùs vix pallidiora, venisque prominulis, basi dilatata exsculpta, pollicaria v. bipollicaria: *lobis* dilatatis, cuneatis, mucronulatis, pinnatifidis integerrimisve: *posticibus* divaricatis, margine rectis, æqualibus, subtruncatis: *sinubus* obtusis, basi membranâ angustâ connexis. *Petoli* filiformes, glabri, basi incrassati, unciales, plerumque flexuoso-convoluti, cirrhum mentientes. *Flores* axillares, solitarii, pedunculati, citrini, contortione pedunculi sæpè resupinati. *Pedunculi* filiformes, lævissimi, flexuosi, quandoque cirrhusi. *Calyx* monophyllus, membranaceus, 5-lobus, subbilabiatus; *labio superiore* trilobo, basi saccato-calcarato: *lobis* ovalibus, obtusis, nervosis, membranaceis: *calcare* è basi conicâ subulato, apice uncinato, obtuso, flore brevior, 3-5 lineas longo. *Petala* 5, unguiculata; 2 *superiora* limbo dilatato, cuneato, inæqualiter inciso-multifido, basi bidentato; *dentibus extimis* unidenticulatis: *disco* infernè maculis parvis, papillosis, sanguineis consperso; 3 *inferiora* multò minora, spathulata, marginibus involutis cucullata, more *Dionææ Muscipulæ* folii fimbriata: *dentibus* setaceis, flexuosis, patentibus. *Stamina* 8, disco calycis carnosio inserta: *filamenta* subulata, glabra, apice mucronata: *antheræ* oblongæ, obtusæ, tetragonæ, biloculares: *loculis* parallelis, connatis, turgidis:

valvulis distinctis, involutis, septum constituentibus, subinde antheræ quasi 4-loculares! demùm longitudinaliter solutis. Ovarium tricoccum: coccis hinc costis 3 elevatis rotundis nitidis instructis. Ovula solitaria, ab apice loculi pendula. Stylus trigonus, lævis. Stigma tridentatum: dentibus subrecurvis. D. Don Mss.

This is clearly the plant of Feuillée, and, consequently, the *T. peregrinum* of Linnæus, who took up the species entirely from that accurate author; although he afterwards confounded with it a totally different plant, which he had received from the celebrated Mutis. This substitution first occurs in the twelfth edition of the *Systema Naturæ*; and the plant is described more at length in the *Mantissa Altera*, published in 1771. It does not seem to be specifically different from *T. bicolorum* of the *Flora Peruviana*, and is distinguished by the greater equality of its petals, which are uniformly multifid, and by the calyx being furnished with lanceolate segments, and a long straight spur. The specimens, although marked "*T. peregrinum*," yet, as they are without the reference to the *Species Plantarum*, it is evident Linnæus did not consider them of sufficient authority.

In the Linnæan Herbarium, there is, also, what we take to be a cultivated specimen, and probably from the Paris Garden, of the same plant sent to the Swedish Naturalist, by Duchesne. Linnæus, in transcribing the synonym of Feuillée, has inadvertently written *quinquefolii folio*, instead of *quinquefido folio*; and this error, although a very trifling one, has been copied by all subsequent authors, affording one, among many examples that might be given, of the servile manner in which synonyms are copied. *T. peregrinum* varies exceedingly in its leaves, insomuch, that one, unaware of the fact, would be led to conclude that several species had been confounded. The present, and the figure in the Botanical Magazine, represent the two extremes. The plant we presume to be a native of Peru, where it has been cultivated from time immemorial, as an ornamental creeper, particularly in the Gardens of Lima, Chancay, and Huanuco. It is called *Malla* by the Indians, and *Paxaritos Amarillos*, i. e. yellow birds, by the Spaniards.

Our drawing was taken from a plant which blossomed in the Garden of Miss Reinagle, by whom it had been raised from Chile seeds, most probably obtained from some garden.

It is a hardy annual, but like many other South American plants, if kept in the greenhouse, it will flourish for several years. In all the really perennial species of this genus, the root is tuberous; *T. polyphyllum* of Cavanilles, and *T. leptophyllum*, have tuberous roots, procumbent stems, leaves deeply parted into numerous segments, in the former lanceolate, and in the latter linear; the flowers in both are yellow, the spur straight and tapering, and the petals cleft at the top. *T. ciliatum* of the *Flora Peruviana*, and *T. tenellum*, are remarkable for the shortness of the spur; in the former the petals are quite entire, and in the latter obcordate. The leaves in both are parted into five or six obovate segments. The fringed bractæ, and stipule-like appendages of *T. ciliatum*, are so fugaceous that they are rarely present in the dried plant. *D. Don Mss.*

The generic name is derived from *tropæum*, a trophy; the leaf resembles a buckler, and the flower a empty helmet, of which trophies were formed.





E. D. Smith del.

Pub. by J. D. Long, March 1881.

HESPERIS speciosa.

Beautiful Rocket.

Linnean Class and Order. TETRADYNAMIA SILIQUOSA.

Natural Order. CRUCIFERÆ. *DC. syst. nat. v. 2. p. 139.*

SUBORDO II. NOTORHIZÆ. Cotyledones planæ, incumbentes. Radicula dorsalis. Semina ovata, immarginata.

Tribus VII. SISYMBRÆ seu Notorhizæ Siliquosæ. Siliqua bilocularis, bivalvis, dehiscens, elongata, linearis teres aut tetragona stylo abbreviato, aut rarissimè breviuscula stylo elongato. Dissepimentum lineare. Valvulæ elongatæ planæ, concavæ aut carinatæ, omnes dehiscentes. Semina in loculo quoque uniserialia, ovata aut oblonga, subtriquetra, immarginata. Cotyledones planæ, incumbentes, (o ||). *DC. syst. veg. nat. v. 2. p. 438.*

HESPERIS. Calyx clausus, bisaccatus. Petala unguiculata, limbo patente obtuso aut emarginato. Stamina libera, tetradynamia. Glandulæ virides, subannulatæ, ad basin staminum lateralium. Siliqua stricta, subtetragona aut compressa: stigmatibus 2 erectis sessilibus conniventibus terminata. Semina oblonga, subtriquetra, pendula, 1-serialia. Cotyledones planæ, incumbentes (o ||).—Herbæ annua, biennæ perennesque; radice fibrosa; caule tereti erecto aut diffuso. Folia ovato-lanceolata aut oblonga, densata aut lyrato-runcinata. Plantæ pleræque pilis aliis lymphaticis simplicibus ramosisve, aliis præsertim ad apicem pilis glandulosis instructæ et inde quasi bituminosæ. Racemi terminales, ebracteati, erecti. Pedicelli filiformes, post anthesin non incrassati. Flores albi aut purpurascetes, sæpè verticillares, interdum odorati. *DC. syst. veg. nat. v. 2. p. 446.*

Sect. II. DEILOSMÆ. Petalorum limbi obovati læti.

H. speciosa, caule suffrutescente ramoso basi squamoso, ramis foliis scapisque stellato-pubescentibus, foliis inferioribus spathulatis obtusiusculis integerrimis aut raro subdentatis basi valde attenuatis: caulinis floriferis oblongo-ovatis acuminatis basi rotundatis sessilibus, pedicellis calycibus duplo brevioribus, petalorum laminis obovatis, siliqua tetragona villosissima, stigma capitata apice indentata.

Stem suffrutescent at the base, branching: *branches* short, clothed at the base with numerous rigid taper-pointed white scales, and with the leaves, scape, and peduncles, thickly clothed with stellate bunches of hairs. *Leaves* alternate, spathulate, or spathulately lanceolate, bluntish at the point, very much attenuated towards the base; lower ones subdentate; those on the scapes or flower-stems, sessile, ovate or oblongly ovate, tapering to a long slender point, broadest and rounded at the base. *Scape* simple, leafy, terminated by a close corymb of flowers, which soon lengthens out to a raceme. *Flowers* of a rosy purple, about the size of *Hesperis matronalis*. *Pedicels* very short, rather more than half the length of the calyx. *Calyx* of 4 deciduous sepals, with membranaceous margins, unequal at the base, clothed with a short white pubescence;

the two outer ones longest, bluntish at the point, and concave inwards. *Petals* 4, spreading; the lamina broadly obovate, and rounded at the end, entire, much veined; unguis slender. *Stamens* 6, erect, two shorter than the others. *Young pod* sessile, somewhat quadrangular, densely villous. *Style* very short. *Stigma* very large, capitate, indented at the top.

Our drawing of this pretty and elegant plant, was made from a fine specimen sent us from the collection of the late Robert Barclay, Esq. of Bury Hill, as long ago as the 6th of April, 1830; but as we had neither pods or seeds, and could not make it agree with any described genus, we kept the figure and description, without publishing it, till the present time, and have not yet been able to procure them. Mr. D. Cameron informed us that he had raised it three years before from Siberian seeds; that it was a beautiful little plant, quite hardy, and perennial, and had never flowered till that Spring. It never produced seeds at Mr. Barclay's; those from which the plants were raised, were received from Mr. Hunnemann, who had them direct from Dr. Fischer.

We have now, for the present, arranged it under this genus, with which it agrees in every respect, as far as we can make out, except the two-lobed stigma; the stigma being capitate, and not lobed in the present species; it is also somewhat related to *Parrya*, (*Neuroloma* DC.) but differs in its leafy scape and four-sided siliqua, agreeing with it in the hard white scales where the leaves have dropped off. It is in habit and pubescence, also, related to *Stevenia*, but differs in the form of the leaves on the scape, and in its four-sided siliqua and much larger stigma; when the perfect seeds and siliqua have been examined, it will probably be found different enough to form a new genus, and to belong to a different tribe, or even a suborder. We cannot find a described species in any genus that is at all related to it, with which it will agree; we have, therefore, given it as a new species, and should we hereafter meet with it again in a proper state for examining with the ripe pods and seed, we will then endeavour to set all our doubts to rights.

Hesperis is derived from *εσπερος*, the evening, several of the species being only scented at that time, particularly in the first section of the genus, to which *H. fragrans* of Number 61 of our first series belongs, as does also *H. tristis*, and *H. alyssifolia*.



1. Calyx. 2. The 6 Stamens dilated at the base, 4 long and 2 shorter. 3. The young Siliqua, which is tetragonal and densely woolly, showing the short Style, and capitate Stigma, which is slightly open at the end.



E. J. North del

Pub. by J. B. Edwards, March 1852.

HELENA gracilis.*Slender Helena.**Linnean Class and Order.* **HEXANDRIA MONOGYNIA.***Natural Order.* **AMARYLLIDÆ.** *Brown prodr. 1. p. 296.**Sect. V. NARCISSEÆ.* Radix bulbosa. Spatha monophylla 1-v. multiflora. Perianthium tubulosum, petaloideum, 6-partitum, coronatum.*HELENA.* Spatha 1-3-flora. Perianthii segmentis in stellam expansis, tubo multo brevioribus: *tubus* grossus valde compressus, angulis obtusis, fere ut in Narcisso, at longior, magisque compressus: *filamenta* omnia fere omnino toto tubo adnatæ: *antheræ* demum spiraliter tortæ, tres superne parte tubi inclusæ, tres tubi semisuperantæ. *Stylus* tubum æquans stigmatibus tribus rotularibus. *Ovarium* triloculare, trivalve: *valvis* bisepiferis: *ovula* numerosæ, bifariam insertæ, obovato-spathulatæ, cætera ut in Narcisso. Characterè gracili sumptus.—*Habitus* in omnibus gracilior multo quam in ultimo, vel sequenti genere. *Folia* linearia fere plana, lineam lata et viridia seu glauca.* *Flavissima* floris, foliis viridioribus.*H. gracilis*, 1-3-floris, scapo gracili compresso superne ancipito læve, spatha pedunculo brevior inferne integra, perianthium flavissimum: segmentis ovatis acutis valde imbricatis horizontalibus saturatiore patula acetabuliformi, ore plicatim eroso-crenulata marcescente 5-6-plo longioribus.*Haworth in Swt. brit. flor. gar. series 2. in end of volume 1. edit. 2. p. 120.**Narcissus gracilis.* *Bot. reg. t. 816.**Narcissus luteus.* *Redout. lilac. 428. non Salisb.*

Root bulbous, clothed with a glossy brown skin, the outside surrounded by numerous loose scales, which sheath the stem a good way up. *Leaves* several, dark green, the broadest about 4 lines in width, deeply channelled on the upper side and rounded below, striated longitudinally with numerous longitudinal slender lines, from 12 and a half to 14 inches in length, elongated linear, nearly of equal breadth from the base to the point. *Scape* erect, rather slenderish, in our specimens about 16 inches in height, flattened or slightly rounded, sharply but shortly 2-edged, striated longitudinally with innumerable slender lines, which extend to the spathe. *Spathe* rather more than an inch and a half in length, not very broad, membranaceous, and extending along way up the tube, nearly to its end. *Peduncles* slender, sharply 3-angled, from an inch and a half to nearly 3 inches in length. *Ovarium* below the perianthium, smooth, dark green, triangular, 3-celled, the cells each producing 2 septums, on which the seeds are longitudinally arranged, one row on each: *ovula* numerous, tapering to the base and widening upwards, of an obovately spatulate form: *tube* nearly double the length of the seg-

ments, flat on one side, and nearly subsemicylindrical on the other: *limb* composed of 6 horizontally spreading, elliptic, acute segments, of a bright yellow. *Crown* nearly flat, more or less plaited or undulate, scarcely crenulate at the edges, 5 or 6 times shorter than the segments of the perianthium, of a bright yellow. *Stamens* 6, 3 inserted in the tube a little below the throat: *filaments* short, smooth, attached to the anthers about half way up their back, and included in the throat; the other 3 attached in the throat, the anthers exserted: *anthers* 2-lobed, bursting in front for the exclusion of the pollen. *Style* smooth, slightly exserted. *Stigma* small, 3-lobed, the lobes rounded and slightly pustulose, flatly spreading.

The present genus is nearly related to the true genus *Narcissus*, but differs in the 3 lower stamens being inserted and included in the throat, the anthers of the 3 upper ones more or less exserted; the longer and more compressed tube, and the shorter segments of the limb: it agrees with it in its short spreading crown, and robust tube. It is also related to *Hermione*, in bearing only 2 rows of ovulæ in each cell, but differs in its short spreading crown, the thickness of its tube, and the narrowness of its foliage; it is also allied to *Jonquilla* in its short spreading cup and form of the leaves, but differs essentially in the form of its ovulæ, in the present being obovately spathulate, and in *Jonquilla* being subreniform. There is no other genus in the section of *NARCISSINÆ* to which it has any need to be compared.

When a boy, we recollect well that a playmate of ours had another species of this genus, with a pale sulphur-coloured flower, with several other species and varieties of *Narcissi* in his garden; he had some dozens of it; the crown was the shortest of any we ever saw. It is still, perhaps, existing in some garden in the same village, which is Cockington, near Torquay, the villagers there being very fond of the cultivation of flowers.

The generic name is a poetical one, derived from *Helena*, the daughter of Leda, by Jupiter, in the shape of a swan, the most beautiful woman of her time; married to Menelaus, King of the Lacedemonians, to whom she bore Hermione. Afterwards, stole away by Paris, which occasioned the war between Greece and Troy, and the destruction of the latter.



1. Perianthium spread open, to show the insertion of the 6 Stamens; 3 of them inserted below the throat, and 3 in the mouth, with the anthers exserted. 2. Ovarium. 3. Style, terminated by the 3-lobed fimbriate Stigma.



ED Smith del

A. L. by J. Brongniart. April 1832.

RHODODÉNDRON ornatum.

Ornamental Azalea.

Class and Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICEÆ. *D. Don flor. nepal. p. 148.*

Subordo III. RHODORACEÆ. D. Don loc. cit. p. 162.

RHODODENDRON. Supra fol. 10, series 2.

Sect. II. AZALEA. Corolla basi tubulosa, infundibuliformis. Stamina 5. Frutices v. Arborescentes, plerique deciduis; ramis piloso-hispidis. Folia oblonga, ovata v. elliptica, pilosa. Flores corymbosi, speciosi, colore varii.

R. ornatum, foliis obovato-ellipticis lanceolatisve acutis apice cartilagineo-mucronatis basi attenuatis; supra glabris nitidis margine ciliatis: nervo subtus setigero; pedunculis villosis-viscosis, corollis externe pilosis, calycis dentibus brevibus inæqualibus obtusis, staminibus longe exsertis.

Azalea pontica-rubescens. Given in litt.

1. *a. speciosum*, leaves elliptically obovate, green on both sides; peduncles rather longer than the bractes; tube of the corolla of an orangy red, upper segment of the limb yellow, the others of a reddish orange.
2. *a. inornatum*, leaves narrower, elliptical, scarcely inclining to obovate; peduncles about the length of the bractes: tube bluish with red lines: upper segment of the limb yellow tipped with white, the others pale pink tipped with white.
3. *γ. luteum*, leaves elliptically obovate, pale green on the upper side, paler and slightly glaucescent underneath; peduncles scarcely longer than the bractes; tube of the corolla tinged with red, limb pale yellow, slightly tinged with bluish, the upper segment of the deepest yellow.
4. *δ. roseum*, leaves elliptic or lanceolate, green on the upper side, and glaucescent underneath; bractes longer than the peduncles; tube and segments of the limb of a pale rose: upper segment yellow edged with rose.

Stem shrubby, much branched: *branches* short, rigid, thickly clothed with woolly hairs. *Leaves* deciduous, elliptically obovate, tapering to the base, and fringed at the edges, of a bright green on both sides; the upper side smooth and glossy, but bearing a few hairs; underneath rather paler, and clothed with bristly hairs along the midrib, which bend inwards, feather-nerved, and tipped with a short brown horny mucrone. *Petioles* short, flattened on the upper side, and rounded below, very hairy. *Corymbs* terminal, many-flowered, surrounded at the base by nume-

rous bractes, that are oblong or spatulate, concave inwards, rounded at the points, membranaceous, deciduous; between those are other filiform ones. *Peduncles* cylindrical, thickly clothed with hairs, and with a viscous substance, about the length of, or a little longer than the bractes. *Calyx* short, 5-toothed, the teeth unequal, blunt. *Corolla* tubular, with a 5-parted spreading limb: tube bluntly 5-angular, of a deep orangy red, thickly clothed with short stiff hairs: upper segment of the limb broadest, yellow, the others of an orangy red, or red tinged with yellow. *Stamens* 5, *filaments* very long and slender, ascending, villosely hairy above half-way up, the upper part smooth and glossy, attached to the back of the anthers a little above the base. *Ovarium* 5-angular, densely hairy. *Style* about the length of, or rather longer than the stamens, hairy at the base, and smooth upwards, pale red. *Stigma* a green head.

The whole of the above description is taken from the variety *a speciosum*, and all the varieties have their different distinctions mentioned underneath the specific character, in English; this, with a flower of each in the figure, will readily distinguish them from each other.

We received all those handsome varieties from the fine collection of hybrid *Azalea*'s, and *Rhododendrons*, that have been raised from seed at Highclere; the specimens were sent to us the latter end of May, 1830, by J. R. Gowen, Esq.; the seeds were raised by Lord Carnarvon's gardener, from *Azalea viscosa* β *rubescens*, fertilized by *A. pontica*, under Mr. Gowen's own inspection, who informs us that the gardener is very clever at raising these seedlings, which have always been under Mr. Gowen's observation till the present time; for the following account we are obliged to him. "There are also many of the same age from *A. coccinea* by the same male parent, and it is difficult to say which sport the most, and produce the most brilliant colours. I am inclined to think that *A. calendulacea* would be a better plant to supply pollen than *A. pontica*, being a later flowerer, more disposed to sport, and more elegant in its habit, but its progeny would not possess that delightful fragrance which belongs to the crop from *A. pontica*, and which is very fine in some of the varieties now flowering here."

"The crop between the magnificent *Rhododendron arboreum* and *R. catawbiense*, is quite hardy; hundreds of them have passed the Winter here, in very exposed situations, without protection and without injury."

"I should observe, that when the foliage of the seedling follows closely that of the male parent *A. pontica*, the flowers also approximate to the male type; on the other hand, when the foliage follows the female, so do the flowers. I think there is about an equal proportion preserved in the seedlings."

For the derivation of the generic and sectional name, see fol. 10. of the second series.



1 var. *speciosum*. 2 var. *incarnatum*. 3 var. *luteum*. 4 var. *roseum*.

SARRACENIA minor.*Smallest Side-saddle Flower.**Linnean Class and Order.* POLYANDRIA MONOGYNIA.*Natural Order.* SARRACENIÆ. *Sot. hort. brit. add. p. 446. Ed. 2.*
p. 18.*SARRACENIA.* *Calyx duplex persistens: exterior 3-sepalus: interior 5-sepalus. Petala 5, decidua. Stamina numerosa. Stigma latum, peltatum: margine 5-angulum. Capsula 5-locularis. Placenta 5-angularis centralis.**S. minor, foliis minoribus tubulatis erectis v. suberectis longitudinaliter striatis unilateraliter lato alatis, valva concava extus carinata brevis mucronata, petalis ovatis discoloribus sepalis paulo longioribus, stigmate lobis incurvis.**Sarracenia minor. Nuttall Mss. Walter flor. carol. 163.*

Perennial. Leaves several from the same root, varying from 6 to 12, according to its size, straight, or sometimes a little curved, small and slender, scarcely at all inflated, of a glossy green when young, but becoming somewhat brown by age, tubular, longitudinally striated with purple lines, and bearing a broad wing on one side, with a thickened margin that becomes of a reddish brown by age; outer leaves more curved than the inner ones, which are straight, slenderer, and bearing a much broader wing than the outer ones: mouth open: tube clothed inside with innumerable shortish hairs, which bend downwards, and occasion a sort of silky appearance: lid at first erect, tapering to a slender point; when full grown ovate, mucronate, acute, hollow on the inside, and densely clothed with short hairs, sharply keeled at the back, strongly nerved, smooth. Scape in our specimen, longer than the leaves, cylindrical, smooth. Flower terminal, solitary, the smallest of the genus yet seen. Calyx double, smooth: outer series of 3 sepals, that are short, ovate, bluntish, concave on the upper side, thick and coriaceous, with membranaceous margins: inner series of 5 sepals, large and spreading, broadly ovate, somewhat acuminate, but blunt at the ends, obsoletely veined, green on the upper side, slightly tinged with purple underneath and at the margins. Petals 5, spreading, obovate, rounded at the

ends, alternate with the lobes of the stigma, and with the sepals, reflexed at the sides where they pass under the edge of the stigma, of a bright purple on the under side, and green tinged with purple on the upper. *Stamens* 32 in our specimens, inserted in the receptacle with the petals, surrounding the ovarium: filaments broad at the base, tapering to a slender point, which is inserted in the back of the anthers: *anthers* of two distinct lobes. *Ovarium* superior, oval, smooth, green. *Style* short, smooth. *Stigma* very large, peltate, 5-lobed, or occasionally 6-lobed, the sides reflexed, with a shallow pit at the summit it is fixed to the style, and from which several veins proceed, which terminate at the end of the lobes; *lobes* acute, uneven at the edges, terminated in a sharp point, which is hooked inwards; the stamens are hid by the stigma, so that they cannot be seen till that is removed.

Our drawing of the present plant was taken in May, 1830, from a specimen sent us from the collection of the late Robert Barclay, Esq. who had received it the year before from Mr. T. Nuttall, who sent it as the true *S. minor*, and mentioned that it was a native of Georgia; Mr. Cameron afterwards informed us that one plant had produced 12 leaves, and another 6, by the month of December following.

This plant appears to have been confused with *S. variolaris* by all Botanists since Michaux published one under that name, but it is not in the least related to it, as may be seen by our figure, *S. variolaris* being a large strong-growing plant with a green flower, and the present a weak slender-leaved plant, and the smallest flower perhaps of the genus: and being a native of so warm a climate, it will probably require a little protection to preserve it from the severe frost, either a frame, or greenhouse, or by the side of a running stream in a wood or garden, where it may be readily supplied with a good covering of dried leaves in severe frosty weather, but it will be most likely a long time before it will be for sale in this country, except some person go to Carolina or Georgia, and send home a quantity of it.

The generic name was given by Tournefort in honour of Dr. Sarrazin, a French Physician residing in Quebec, who sent it him from Canada; it is named side-saddle flower, from its large stigma resembling a saddle.



1. A small plant in miniature. 2. Stamen detached. 3. Ovarium, terminated by the Style, and large umbrella-formed Stigma, with its five lobes curved inwards.



807. 11. 11. 11. 11.



Pub. by J. Ridgway April 1881

LUPINUS Marshallianus.*Marshall's hybrid Lupine.**Linnean Class and Order.* MONADELPHIA DECANDRIA.*Natural Order.* LEGUMINOSÆ. *DC. prodr.* 2. p. 93.*Subordo* I. PAPILIONACEÆ.—*Tribus* V. PHASEOLÆ. *Supra* 12. ser. 2.*LUPINUS.* *Supra folio* 12, *series* 2.

Marshallianus, tomentoso-pilosis, caulibus suffrutescentibus patentibus ramosus, foliis inferioribus 9-14-foliolatis; superioribus 8-5-foliolatis: foliolis subellipticis v. lanceolatis acutis sericeo-tomentosis, stipulis petiolo adnatis apice attenuatis piloso-ciliatis, floribus in verticilli congestis, bracteis angustis longe attenuatis flore longioribus.

Stem suffrutescent, much branched, the branches spreading, if not supported, clothed with soft woolly and silky hairs, as is every other part of the plant, leaves, petioles, stipules, bractes, and calyx. *Leaves* varying much in their number of leaflets, on the lower part of the stem from 9 to 14, and decreasing in number as they approach the flower stem: *leaflets* varying from elliptic to narrowly lanceolate, sharp-pointed, clothed with a silky tomentum, channelled on the upper side, regularly and flatly spreading. *Peduncles* longer on the bottom leaves, and frequently purple, sheathing the stem at the base, particularly on the young shoots before the flowers appear: upper ones shorter, and less purple, tapering upwards, the leaflets proceeding from a knot at the point. *Stipules* joined a considerable way up the petiole, but ending in loose, more or less elongated acute points. *Spike of flowers* from 8 to 18 inches in length, the scape between the flowers much angled, and more or less tinged with purple. *Flowers* crowded in whorls, with now and then a single one between, generally 6 in a whorl, but not so many towards the top. *Bractes* very long and slender, and tapering to a long point, extending beyond the flowers. *Pedicles* short, or scarcely any. *Calyx* 2-lipped; upper lip ovate, two-lobed: lower one oblongly ovate, acute, bearing a small bracte on each side. *Verillum* blue, white at the base. *Alæ* or *wings* pale blue, striped with darker. *Keel* acute, upper

part purple, below bluish white, parted at the base, and producing a ear on each side, a little above the base. The 10 Stamens, all united in a tube at the base, and distinct at the points. *Anthers*, 5 small round globular ones, and 5 oblong.

This curious hybrid production of Lupine was raised by C. Marshall (Gardener at Mrs. Langtey's, Southborough, Kingston, Surrey,) from the seed of *L. lepidus*, as we are informed by him: as the plant is now suffrutescent, and the habit and foliage being so much like *L. tomentosus*, that species must have been the other parent: a plant sent to us, and which was planted in our garden, has stood the Winter, without having a leaf injured, and is become quite suffrutescent and bushy, like the male parent. In Mr. Marshall's account of it, he says the plant continues in bloom till the sharp frost sets in, and that it had thirty spikes in flower on it at one time, from 12 to 18 inches in length, although it had been moved late in Spring. This plant, when dormant, produces a knot, at the end of each shoot, and joint, and up the stem, clothed with leaves; and there can be no doubt but those would all soon make plants, if taken off and planted in the ground, so that it will soon become plentiful.

We have seen flowers of several other curious hybrids of this genus, sent to us at the same time as the present, and others in some other collections, particularly in that of Messrs. Allen and Rogers, Nurserymen, King's Road, and Battersea; in the latter Nursery they are chiefly grown; some of those are very beautiful, and might readily be taken for real species, if their origin was not properly determined.

For the derivation of the generic name, see folio 12, of the second series.



1. Calyx. 2. Vexillum. 3. The two wings. 4. Keel. 5. Stamens laid open, to show the distinction between them.



GLADIOLUS cochleatus.*Spoon-lipped Corn-flag.***Linnean Class and Order. TRIANDRIA MONOGYNIA.****Natural Order. IRIDÆÆ.** *Brown prodr. 1. p. 302.*

GLADIOLUS. *Inflorescentia* spicata, raro sola. *Spatha* bivalvis, oblonga (modò longissima). *Perianthium* tubuloso-sexfidum, irregulare vel subæquale: *tubi* faux brevis turbinata v. abruptè cylindracea atque longa: *limbus* plerumque nutans. *Stamina* 3, secunda (adscendentia). *Styli* 1: *stigmata* 3, cuneato-ligularia, conduplicata, integra. *Capula* membranacea, ovato v. oblonga, trigona. *Semina* biserialia, alato-paleacea, numerosa, cumalata.—*Herbæ subpedales* v. *ultra tripedales*. Bulbotuber ovatum vel rotundum vel depressius orbiculatum; exuviiis contextu maximè vario. Folia collateralia, plura, linearia vel latius gladiata, nervo medio principi costata, vel subtriquetra, v. decussata modo cartilagine crassiore marginata. Caulis teres raro angulosus, simplex vel subramosus. Flores grandes, speciosi, disiti, raro parvi densi. Stylus gracilis, tristriato filiformis. Semen alato-paleaceum, cujus testa sicca tenui ampla subvacua albumine parvo facta è cavitate in marginem comprimitur. Ker Iridearum Genera 1827. p. 129. *parum mutatum.*

G. cochleatus, foliis angusto-linearibus binerviis strictis rigidis glaucescentibus elongatis; apice attenuatis; marginibus et nervo medio prominentibus, scapo simplici gracili elato, segmentis perianthii patentibus elliptico-ovatis obtusis: superioribus minoribus intus rubro-pictis: inferioribus adscendentibus cochleato-concavis, tubo brevi spathis multum brevior.

Stem slender, in our plant 20 inches and a half in length, somewhat glaucous, and striated downwards, leafy all the way up. *Leaves* varying in length upwards, somewhat glaucous, narrowly linear, elongated, and tapering to a slender point, straight and rigid; *lower ones* 2-nerved, the nerves and margins thickened and prominent, the middle nerve very much so on both sides: about a line and half in breadth at the base, sheathing the stem a considerable distance up: *upper ones* narrower and shorter, concave inwards, more glaucous. *Flowers* 2 in our specimen. *Spathe* 2-valved, outer one much longer than the inner one, but both longer than the tube of the perianthium, which they clasp nearly to the top, broadly lanceolate before the flower expands, afterwards rolling inwards and appearing narrower, glaucous, and striated with numerous small stripes. *Perianthium* snowy white, with a very short tube; *limb* 6-cleft: 3 upper segments about half the size of the lower ones, and more erect, but slightly bent backwards; outer one of the three, wedge shaped, marked with an open compass-shaped red mark,

which nearly joins two crimson lines which proceed to the base, and there become connected: two inner elliptically ovate, also marked with an open compass-shaped red mark, below this are two red marks also, running down the centre of the segment, and extending nearly to the edge at the upper part, which gives the appearance of a heart, and between the stripe and the edge they are slightly stained, which gives a faint idea of a feather: two outer lower ones very large and spreading, elliptically inclining to ovate, the points somewhat reflexed, and becoming in a day or two slightly undulate; those are also marked with two red lines, from a little below the middle to the bottom, the upper line shortest: *lower segment* obovately ovate, spoon-shaped, hollow, broad at the point, becoming a little undulate at last. *Stamens* 3, slightly ascending, shorter than the style: *anthers* linear: *pollen* straw-coloured. *Style* white. *Stigma* 3-cleft: the segments very slender at the base, but dilated at the ends.

In the plant when growing the leaves are all rigid and straight, those with their tops bent down in our figure, is so done, to show the length and form of the leaf: the hollow spoon-shaped, ascending, lower segment of the flower, appears to distinguish the present from every other species; there are several with somewhat similar foliage, figured in Jacquin's *Icones*, but all with very different flowers; the one figured in the forty-second volume of the *Botanical Magazine*, fig. 2585, under the name of *G. debilis*, is the nearest related to the present one, of any we have seen, but the segments of the flower are all broadly ovate and acute, (oval it says in description), the outer segment of the three upper ones is as large as the lower one; in ours it is the least in the flower, and cuneate; the two next in ours are elliptic, a little inclining to ovate, and marked as described above; all ours are obtuse, and some, particularly the lower one, emarginate when first expanded: in the other, the two upper ones are ovate, marked at the base with a three-lobed carmine spot, according to the description, but it would be difficult to make out the three lobes in the figure; the two lower side ones in this are very broad and flatly spreading; the lower one also spreading, but a little smaller; all of a snowy white, with no spots or marks: in ours the two outer lower ones are elongated, elliptical, scarcely inclining to ovate, and marked with lines as mentioned above: the front one of ours is almost horizontal, or ascending a little, hollow and spoon-shaped, from which our specific name is derived; the leaves in both are very narrow, and both strongly nerved; in ours they are erect and rigid; in the other by the figure, they appear weak and flaccid: the flowers of both are of a snowy white, except the coloured marks on some of the segments.

The plant from which our figure was taken, we received from Mr. H. B. Page, Botanic Garden, Southampton, on the 10th day of March last, who informs us that he received it from the Cape two years since.

The generic name is derived from *Gladiolus*, a small sword, a dagger, or poniard, from the shape of the leaves of several species of this genus.



1. The 3 Stamens. 2. Style, terminated by 3 slender Stigmas, dilated at the points.





E.D. Smith del.

Pub. by J.B. McGraw, May 12, 1922.

SCILLA præcox.

Early-flowered Squill.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. p. 274.

SCILLA. *Perianthium* profunde 6-partitum, petaloideum, rotatum, æquale, patens, subdeciduum. *Stamina* 6, æqualia. *Filamenta* filiformia v. basi dilatata plana, basi segmentis inserta. *Antheræ* posticæ. *Stylus* filiformis, erectis. *Stigma* simplex. *Ovarium* subrotundum, triloculare, tri-valve, pluriovulare. *Capsula* valvis medio septiferis: loculis oligospermis. *Semina* subglobosa atra.

S. præcox, scapo angulato striato, racemo subcorymboso v. elongato, pedunculis flore duplo v. triplo longioribus, bracteis obscuris.

S. præcox. *Willd. spec.* 2. p. 128. *Link. enum. hort. ber.* 1. p. 327. *Swt. hort. brit. edit. I.* p. 419. n. 9. *Ed. II.* p. 528. n. 14.

Hyacinthus germanicus liliiflorus stellatus. *Pass. hort. hyem.* 12. c. ic. bon.

Bulb smallish. *Leaves* 2 or 3, tapering to the base towards the bulb, considerably curved inwards where they emerge from the ground; oblong, hollow on the upper side, tapering to the point into a callous mucro, glaucous, striated with numerous longitudinal lines, about 2 or 3 inches in length, when the flowers begin to expand, becoming longer afterwards, and nearly 9 lines in breadth. *Scape* somewhat angular, inclining to flattish, and strongly striated with numerous lines; of a bright purplish red colour; when first flowering, about three inches in height, afterwards extending to the height of 5 or 6, the pedicles extending in length all the time, some of the lower ones becoming at last of a great length. *Pedicles* 2 or 3 times longer than the flower when in bloom, and of a red colour, produced from the top to the bottom of the scape, some even from the axils of the leaves. *Flowers* about 10 lines across, considerably larger than *S. bifolia*, about the size of *S. amænula*, but less than *S. amæna*, or *S. sibirica*, of a fine dark blue, stellately spreading: *segments* oblongly lanceolate, distinct: *buds* red on the outside, before expansion. *Bractes* blunt, minute, quite inconspicuous. *Stamens* 6, inserted near the base of the segments, and opposite to them. *Filaments* inserted in the back of the anthers, eared at the

base before bursting. *Ovarium* rounded, 3-celled, 3-valved : *valves* bearing 6 to 8 ovula. *Style* upright. *Stigma* a small blunt head.

Our drawing of this beautiful little early flowering bulb, was made from some fine specimens of it, that were in flower in great perfection in March last, in the fine collection of bulbs cultivated by A. H. Haworth, Esq.; the figure was drawn rather too soon, as the raceme lengthened out considerably afterwards, and became much more elegant, the footstalks also of the flowers lengthening out at the same time, which gave the plant altogether a much more graceful appearance; this plant was first introduced, we believe, several years ago, in the collection of the Apothecaries' Garden at Chelsea, but it has now disappeared from it for some time, and we do not know any collection that it is in at present, except that of Mr. Haworth.

This certainly ranks among the prettiest of our hardy Spring bulbs, very few can come up to it for beauty, and its present scarcity makes it still the more desirable; and should it not seed, it is likely to continue scarce for some time: according to Passares it is a native of Germany, as he has named it in the work above referred to, (*Hyacinthus germanicus liliiflorus stellatus*), and his figure agrees precisely with ours: like the rest of this interesting genus, it succeeds best in a rich light sandy soil, and may be occasionally increased by offsets from the bulbs, or from seeds, which may perhaps ripen occasionally.

The generic name is derived from *σκίλλα*, a sea onion, *Plut.* 9. 74. most probably after *Scilla maritima*.



1. The 5 Stamens, front and back view: the back, or side view, to show how the filament is inserted in the back of the anther. 2. Ovarium, terminated by the Style and Stigma.



E.D. Smith del.

Printed by J. Rogers of New York 1863

W. H. Webb sc.

HELLÉBORUS purpurascens.*Purplish Bear's-foot.**Linnean Class and Order.* POLYANDRIA POLYGYNIA.*Natural Order.* RANUNCULACEÆ. *DC. syst. veg. nat. v. 1. p. 127.*

Tribus IV. HELLEBORÆÆ. *Æstivatio calycis et corollæ imbricata.* Petala nunc 0, nunc 5-10 (nectaria Lin.) irregularia sæpiùs bilabiata nectarifera; calyx sæpiùs coloratus petaloideus. Carpella polysperma sæpiùs libera, suturâ longitudinali intùs debiscentia, interdùm in pericarpium multiloculare coalita; semina horizontalia, placentis secus suturam dispositis adfixa. — *Caules herbacei; folia alterna, nunc radicalia, nunc sæpius caulina; flores variè dispositi, colores omnes admittentes, dupli modo pleni, filamentis nempe in petala plana, aut antheris in petala bilabiata evadentibus.* *DC. syst. veg. v. 1. p. 306.*

HELLÉBORUS. Calyx persistens 5-sepalus, sepalis subrotundis obtusis magnis sæpè viridibus. Petala 8-10 brevissima tubulata infernè angustiora nectarifera. Stamina 80-90. Ovaria 3-10. Stigmata terminalia orbiculata. Capsula coriaceæ. Semina duplici serie disposita elliptica umbilicata. *DC. prodr. 1. p. 46.*

- H. purpurascens*, foliis radicalibus subtilis subpubescentibus palmatisectis; segmentis basi cuneatis apice 3-5-lobis, caule bifloro, foliis floralibus subcaulibus, calycis sepalis subrotundis coloratis. *DC. syst. veg. nat. v. 1. p. 316. Prodr. 1. p. 47. excl. syn. Bocc. mus. 2. p. 26. t. 11. f. 2. R. R. ex Tenore prodr. 1823. p. 26. spec. distincta.*
- H. purpurascens.* *Waldst. et Kit. pl. rar. 2. p. 105. t. 101. Pers. syn. v. 2. p. 107. Spreng. syst. 2. p. 658. Swt. hort. brit. ed. 2. p. 7.*

Leaves and *Flower-stems* several from the same root. *Spathes* 2, surrounding the base of the petiole or leaf-stalk, one longer than the other, keeled at the back, and terminating in a small point. *Leaves* extending above the flower-stalk, particularly in a strong plant. *Petiole* lengthening out as the plant advances in strength, somewhat bluntly angular near the base, a channel proceeding from the leaf a considerable way down the stem, more or less spotted, or tinged with purple, particularly as the weather becomes warmer, clothed with small distant hairs. *Leaves* palmately divided: *root ones* underneath slightly pubescent: *segments* 3 to 5-lobed, and wedge shaped at the base: *leaflets* on short footstalks, tinged with purple on the upper side; more or less broadly or narrowly lanceolate, terminating to a sharp point, upper part sharply serrated, but entire a considerable way above the base. *Flower-stem* erect, branched

in our specimen: *branches* deeply angular, 1 or 2-flowered, leafy, the leaves nearly sessile, trifoliate, and not so deeply serrate; those below the flower sometimes simple. *Flowers* more or less green or purple, according to the state of the weather, or mildness of the climate: in this also depends the size of the plant, as well as flowers. *Calyx* persistent, of 5 sepals, roundly oval, more or less livid purple at the back, according to the mildness of the season when in flower: inside green, tinged with purple. *Petals* varying from 8 to 10, according to the size of the flower, sometimes even less, tubular, narrowing downwards, and honey-bearing, green above, and shadowing downwards to a pale yellow. *Stamens* varying more or less, according to the size of the flower. *Ovaries* varying from 3 to 6 (rarely 7) from Waldstein and Kitaibel: terminated with a slender *Style* and an orbicular *Stigma*.

Our drawing of this species was taken from a plant in flower, in the beginning of March last, which had now flowered, for the first time, in the Apothecaries' Company's Garden, at Chelsea. Mr. Anderson looked for the date when the seed was sown, which was as long ago as the year 1820; as it flowered so very early in Spring, and at the same time the weather being rather severe, the flower-stem, and the stem-leaves, and flowers, became stunted by the cold; this accounts for the difference between our figure and that in *Flora Hungarica*, and in the size and colour of the flowers. Native of woods in Hungary.

The best situation for this plant, would be that of a warm sheltered wood, where the dead leaves, with which it might be covered in Winter, would protect it from the cold, and cause it to grow luxuriantly in Spring, and produce larger and better coloured flowers.

The generic name is derived from *ελλεβορος*, a poisonous plant, that is said to be used to cure all the most malignant disorders.



1. Stamens, surrounded by the tubular, honey-bearing petals. 2. Petal detached. 3. Stamen detached. 4. The 4 Ovariums, terminated by the Style, and orbicular Stigma.



T.D. Smith del.

Pub. by J. Ridgway May 1851.

Walden.

AJAX pumilus.*Small 6-lobed Ajax.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* AMARYLLIDÆ. *Brown prodr.* 1. p. 296.*Sect. V. NARCISSINÆ.* Radix bulbosa. Spatha monophylla. Flores umbellati, multiflori v. solitarii. Perianthium tubulosum petaloideum, 6-partitum, coronatum.*AJAX.* Supra folio 101. ser. 2.*Div. * Minores, flaviflores, tubo longiusculo.*—† Perianthii segmentis semierpansis.*A. pumilus*, foliis latiusculis planis glaucis patentibus, perianthii segmentis anguste obcuneatis distinctis, coronâ ore sexlobâ patulâ minutissime rugosiusculâ.*Ajax pumilus.* *Haworth in Sweet's British Flower Garden, at the end of vol. 1. second series. p. 1. edit. 2. p. 1.**Ajax cuneiflorus.* *Salisb. in Hort. trans. 1. p. 345. Haw. in Succ. suppl. p. 113.**Narcissus pumilus.* *Panz. hort. hycm. p. 8. c. ic. Salisb. prodr. p. 220. Bealer hort. Eyst. vern. 3. ord. fol. 5. f. 4.**Narcissus cuneiflorus.* *Schult. syst. v. 7. pars. 2. p. 337.**Narcissus hispanicus medius luteus.* *Theatrum Flora, t. 20.*

Bulb small, covered with a thin brown bark. *Leaves* considerably spreading, glaucous, broadish, slightly concave, attenuated downwards towards the root, blunt at the point, very much striated. *Scape* rather longer than the leaves, flattened downwards, deeply striate. *Spathe* membranaceous, extending to the end of the tube, tapering to the point. *Ovarium* bluntly triangular, of a deep green, tapering downwards to the short pedicle. *Perianthium* tubular; tube green on the outside, and yellow on the inner: segments 6-parted, distinct, oblongly lanceolate, acute, spreading, about the length of the crown, but scarcely extending to the ends of the lobes, but a little longer than the tube: crown inflated upwards, open at the mouth, 6-lobed, the lobes unequally toothed, somewhat plaited, and a little rugged on the inside. *Stamens* 6, of the same length; filaments inserted in the base of the tube, white, tapering upwards, inserted into the back of the anthers, a little above the base: anthers linear, all inclosed in the tube. *Style*

white, and smooth, tapering upwards. *Stigma* 3-lobed, the lobes rounded.

Mr. Haworth has now restored the original name given by Passares, in his *Hortus Hyemalis*, or work on Winter flowers, above 200 years since; it was also the first name given to it by R. A. Salisbury, in his *Prodromus stirpium in Horto ad Chapel Allerton*, published in 1796; though he afterwards changed it to *A. cuneifolius*, which was also adopted in *Haworth's Supplementum Plantarum Succulentum*, published in 1819, at page 113; there is also a *pumilus*, published in *Redoute's Liliaceæ*, t. 409, with a small white flower; but as that is nearly related to *N. tenuior*, it is now placed in another genus with it: our species is a native of Spain.

The present species, though having been known to be cultivated for so long a time in the gardens of the curious, still continues to be scarce in the collections about London: for the opportunity afforded us of giving this figure, we are obliged to A. H. Haworth, Esq., who possesses a few bulbs of it; from its early and free flowering, it is a desirable bulb for the garden, and its flowers are produced early in March if the weather prove mild, and continue in flower for a long time; and, like the other species of this genus, succeed well in a rich loamy soil; and if a little light rotten dung be mixed with it, they will grow all the stronger, and produce larger flowers; with a little trouble they would most likely produce seeds, by applying some pollen to the stigma when in bloom; by these means they may become more plentiful; and the sooner they are sown after they are quite ripened and hardened, the quicker they will be up; for if they are not sown till Spring, they will seldom make their appearance till their next growing season; they are also increased by offsets from the bulbs.

For the derivation of the generic name, see folio 101, of the second series.



1. The 6 Stamens of equal lengths, inserted in the base of the tube. 2. Ovarium, terminated by the Style, and 3-lobed Stigma.



22, 1842

22, 1842

SPREKELIA formosissima.

Crimson Jacobea Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEE. *Brown prodr.* 1. p. 298.

Subordo III. HIPPEASTREE. *Scapus* cavus. *Tubi* faux arcata. *Sepala* testa nigra. *W. Herb. bot. mag.* vol. 52. 2606. p. III.

SPREKELIA. *Perianthium* corollaceum, 6 partitum, inæqualiter patentibus: *tubus* subnullus: *segmentis* inferioribus devexis; superioribus reflexis. *Stamina* 6. *Filamentis* declinatis, recurvatis, fasciculatis, pariter membranâ connexa et perianthii basi inserta. *Ovarium* obtuse trigonum, triloculare, trivalve: *Ovula* plana, in valvis biserialim imbricata inserta. *Stylus* filamentis longioribus apice adscendentibus. *Stigma* tripartita: *segmentis* obtusis reflexis papillosis.

Sprekelia. *Laur. Heist. Descriptio novi generis plantæ rarissimæ et speciosissimæ Africanæ ex Bulbosarum Classe.* p. XII, et XIII. *Bruner.* 1753. *Herbert Appendix on Amaryl.* p. 34-35.

S. formosissima. *Herbert Appendix,* p. 35. *Swt. hort. brit. edit.* 2. p. 509. *Amaryllis formosissima.* *Linn. spec.* p. 420. *Act. holm.* 1742. p. 98. t. 6.

Willd. spec. 2. p. 62. *Curt. bot. mag.* t. 47. *Redout. Liliac.* t. 4. *Lilio Narcissus Jacobeus flore sanguinea nutante.* *Dill. elik.* t. 162. f. 198. *Knorr. Thesaur.* t. 99.

Lilio Narcissus III. *Trew flor. imag.* t. 24.

Bulb roundish, with a long neck, thickly clothed with thin brown scales. *Leaves* annual, green, varying from a quarter to half an inch in breadth, and from 6 to 14 inches in length, elongately linear, tapering to a point, channelled down the centre, and keeled at the back, striated with numerous longitudinal lines, generally erect when the plant is in flower, afterwards more or less spreading. *Scape* hollow, one or rarely two-flowered, with an acute angle on one side, and a blunt one on the other, broadest below, and tapering more or less towards the flower, also striated with numerous lines. *Spathe* surrounding the peduncle, about 3 inches in length, succulent before the flower expands, afterwards becoming dry and membranaceous, strongly ribbed, and purple when fresh, point extending considerably above the ovary, frequently burst a little below the point, and the point closed, sometimes open all the way to the end. *Peduncle* about two inches long, enclosed in the spathe, straight, hollow, and striate, forming a sort of division or knot where it and the spathe proceed from the scape. *Ovary* bending

inwards from the peduncle, bluntly 3-sided, dark green, 3-celled, and 3-valved: the ovula flat, seated on two septums in each valve, closely pressed to each other. *Perianthium* corollaceum: *tube* scarcely any: *segments* 6, of a bright crimson, green at the base, all strongly striated: upper segment broadest, proceeding direct from the ovarium, straight a little way up, then ascending a little to the point, after being expanded two or three days it becomes reflexed: two side ones inside of the upper one, considerably narrower than the other four, spreading, and bending round like a bow, attenuated a little towards the base: 3 lower segments hanging down, their points curved inwards towards the scape: middle one rather shortest and broadest, enclosed above half way with the outer ones. *Stamens* 6, inserted into the base of the perianthium: *filaments* bright red, about four inches in length, thickest at the base, and tapering to a slender point, which is inserted into the anther considerably above the base: *anthers* linear before bursting, channelled on both sides through the centre, nearly an inch in length before bursting, crimson purple: *pollen* straw-coloured. *Style* four inches and a half in length, bright red, more than half an inch longer than the filaments, point a little ascending. *Stigma* 3-cleft, segments spreading, a little recurved, obtuse, pustulose.

Our particular reason for giving a figure of this plant was, because it is so seldom seen with two flowers on the same scape, which was the case with ours, and another scape with a single flower produced from the same bulb, at the Nursery of Mr. Dennis, Grosvenor Row, Chelsea; where we have since seen two other bulbs, producing two flowers on a scape, but no other scape. We see the same thing in *Dillenius Hortus Elthamensis*, above referred to: and the Hon. and Rev. W. Herbert mentions in his account of the genus that he had seen it twice with a two-flowered scape.

The present plant will endure our winters in the open ground, if planted about four inches deep, and covered with a mat or some litter in severe weather, particularly by the side of a dry wall; or the bulbs may be taken up and dried in Autumn, and planted again at the latter end of February or beginning of March, if the weather allow.

This genus was first named by Heister, in the work already quoted, in honour of Baron M. De Sprekelsen, sometime Secretary to the Republic of Hamburg, a great promoter of Botany, and is also adopted by the Hon. and Rev. W. Herbert.



1. The 6 Stamens inserted into the base of the perianthium, showing their long red filaments, and the two-lobed linear anthers and their insertion. 2. Ovarium terminated by the Style, and 3-cleft blunt pustulose Stigma. 3. Cross cut of the Ovarium to show how the ovula are imbedded in the 3 valves. 4. Slice cut off the outside to show how the ovula are placed on the septums.



Rec'd by L. Radway, June 1972

ED: 7/14/27

AJAX albicans.*Greatest Spanish White.**Linnean Class and Order.* **HEXANDRIA MONOGYNIA.***Natural Order.* **AMARYLLIDÆ.** *Brown prodr. 1. p. 298.**Div. I.* **Radix bulbosa.** *Flores* spathacei, umbellati, raro solitarii.*Sect. V.* **NARCISSINÆ.** *Radix* bulbosa. *Spatha* monophylla. *Flores* umbellati aut solitarii, pluri aut multiflori, aurei, lutei, sulphurei, albescen-tes, albi, nivei et viridescen-tes. *Perianthium* tubulosum petaloideum, 6-par-titum, coronatum.*AJAX.* *Spatha* uniflora. *Perianthium* 6-partitum patens: tubo turbi-nato; coronâ grandi poculiformi perianthii lacinii subæquanti, lobata, cre-nata, serratave, fere vel plus longitudine laciniarum sæpissimè imbricarum perianthii lacinia. *Ovarium* triloculare, trivalve; *valvis* bisep-teris. *Ovula* in valvis bifaria raro 4-faria inserta. *Stamina* 6: *filamentis* basi perianthii insertis, filiformibus strictis, æqualibus: *antheræ* posticæ.—*Herbæ* (Europæ et Orientali) *bulbosæ*; *bulbis* tunicatis inferne rotundatis; *superne* conicis; *foliis* semper bifariis loratis vel ensiformibus obtusis sæpè infernè carinatis grosse nervoso-striatulis, supra plano-canaliculatis plus minusve glaucis, ante anthesin fere semper erectis. *Scapis* semper unifloris.*Div. ***.* **ALBIFLORES.** *Floribus* mediocribus seu majusculis, primo sulphureis demum coronâ longissima.*A. albicans,* foliis erectis loratis obtusiusculis glaucis striatis: subtus cari-natis: supra concavis: marginibus crassiusculis, *spatha* tubo multo bre-viori, perianthii lacinii ovato-lanceolatis patentibus tubo coronum bre-vioribus, corona lobulato crenata sulphurescente.*Ajax albicans.* *Haworth Monog. Narciss. in Syst. brit. flor. gar. n. 25. ser. 2. p. 2. edit. 2. p. 8.**Pseudo-Narcissus hispanicus maximus albidus.* *Park. par. p. 100. t. 101. f. 1.*

Bulb obversely top-shaped, producing numerous roots from the base. *Stems* 3 from the same bulb, two of them pro-ducing flowers; main stem 4-leaved, the other two 3-leaved; all inclosed in a white sheath at the base. *Leaves* from the sheath to the point, from 9 to 10 inches in height, upright, or a little spreading, ending in a bluntish point, considerably glaucous; and striated with deep lines at the back, which is also keeled; the upper side somewhat concave, and the mar-gins rather thickened. *Scape* somewhat flattened, striated with various stripes, and somewhat ancipitous, tapering up-wards, and becoming slender just at the spathe. *Spathe* mem-branaceous, connected at the base, inclosing the lower part of the peduncle, considerably shorter than the tube, ovate, scarcely acute, but bluntish. *Peduncle* about 10 lines in length, or probably sometimes less. *Ovarium* glossy. *Perian-thium* corollaceum, tubular, with a long tubular crown; *tube* about 9 lines long, top-shaped, tapering to rather a slen-

der base, seated on the ovarium: *segments* 6, ovately or oblongly lanceolate, horizontally spreading when in perfection, almost an inch and a half in length, of a pale straw colour when first expanded, gradually changing to white: *cup* above 2 inches and a half in length, at first pale yellow, changing to straw-colour and almost to white; edge of the crown slightly lobed and crenulate, and a little crispate. *Stamens* 6: *filaments* all about the same length, inserted in the base of the perianthium, about an inch and 2 lines in length, half the length of the tube, slender, of a glossy whiteness: *anthers* linear, 2-lobed, inserted by their back to the filaments a little above their base. *Style* seated on the ovarium, longer than the stamens, tapering upwards from the base, of a bright straw-colour. *Stigma* 3-lobed, the lobes rounded and pustulose.

Our drawing of this rare and newly introduced species, (which appears to have been lost to our gardens for many years,) was taken from a bulb with 2 flowers sent us on the 11th of April last, from the fine collection at Bitton, belonging to the Rev. H. T. Ellicombe; Mr. Haworth, also, possesses several bulbs of it, which we saw in flower in his garden this Spring. We have also seen it in other collections about London, introduced from Holland this year, under the name of *moschatus*; but the *moschatus* of the Linnean Herbarium, which we examined last year, is a very different plant; it is the *moschatus* δ of the Botanical Magazine, *tab.* 1800, and the *candidissimus* of Redoute's Liliacées, *tab.* 188. The present plant, according to Mr. Haworth's Monograph of Narcissi, is a native of Spain; it begins flowering the beginning of April, and some will be in flower at nearly the end, depending partly on the time that the bulbs are planted in the ground, or whether they have been left in altogether.

The present species, as well as many other strong growing ones, thrive best in a rich sandy loam; and if there is a little dry rotten dung mixed with it, they will thrive all the better, and attain a greater height. The greater part of this genus seed freely, particularly if a little pains be taken with them when in flower; or if the various kinds of bees be plentiful when they are in flower.

For the derivation of the generic name, see folio 101, vol. 2, of the second series.



1. The 6 Stamens inserted in the base of the perianthium; the filaments very long, attached to the back of the anthers, a little above the base. 2. Ovarium terminated with the Style and 3-lobed Stigma.



I. Danforthii det.

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W. L. C.

HERMODACTYLUS longifolius.*Long-leaved Snake's-head.***Linnean Class and Order. TRIANDRIA MONOGYNIA.****Natural Order. IRIDEÆ. Brown prodr. 1. p. 302.**

HERMODACTYLUS. *Spatha* univalvis aut bivalvis acutis rigidis persistentibus foliiformibus longitudine floribus expansis; pedunculo et ovario inclusis. *Perianthium* 6-partitum: segmentis exterioribus multo majoribus reflexis: interioribus minimis, basi involutis cucullatis aut angustis planis apice abrupte attenuatis angustissime elongatis. *Stamina* 3, basi perianthii inserta: *filamenta* compressa distincta: *antheræ* basi affixæ, biloculares, longitudinaliter debiscentes. *Styli* brevi. *Stigmata* 3, petaliformia, magna, bifida, patentia, acutissima. *Ovarium* variabile, oblongum v. subrotundo-pyriforme.

H. longifolius, vagina radicali longi submembranacei foliis tecti inclusi, foliis radicalibus longissime extensis crassis regulariter quadrangularis striatis glaucis: scapo brevo basi subinflato apice acuto, unifloro, perianthii segmentis exterioribus obovatis emarginatis reflexis: interioribus basi cucullatis apice attenuatis acutis, stigmata margine lacerato-serrata.

Hermodactylus. *Tournefort. Cor. p. 60. Salisb. Hort. trans. v. 1. p. 304. Læviger. Dioscorides.*

Root tubers varying from 1 to 2. **Sheaths** tightly surrounding the leaves at the base, varying in length, white, of a soft feel to the touch, somewhat inclining to membranaceous, but rather succulent, points soon decaying. **Leaves** very glaucous, almost white, quadrangular, longitudinally striated: root ones frequently 3 to 4 feet in length, the largest above half an inch in circumference, and 3 lines in breadth across the angle in the widest part, the angles sharp edged. **Flower-stem** in our plant, from the ground to the top of the flower, about 9 inches in length. **Scape** smooth, rounded. **Scape-leaf** rather inflated towards the base, where it surrounds the scape, tapering upwards, and raising only to the base of the flower. **Spathe** leaf-like, persistent, rigid, 1-valved, extending to the top of the flower when expanded, somewhat ventricose over the ovary, but tapering upwards to a sharp point. **Ovary** oblong, 6-lined, tapering to the flower, considerably below it. **Perianthium** with a short tube, deeply 6-parted: 3 *large outer segments* about 3 inches in length, narrowing to the base, curved a little inwards from the 2 sides, of a green colour, slightly tinged with purple nearly to the bend, and a pale yellow line extending down the centre to the base; at the bend they are considerably curved backwards, and 2 greenish white marks in the bend, edged with dark purple, from there to the point broadly obovately-ovate, with a slight notch at the point, or retuse, of a bright velvet on the upper side, edged with green; back green, and hollow in the recurved part: 3 *small inner segments* very small, and curved inwards at the base, and a considerable way up, so as to make them cucullate, or hollow; from this it becomes abruptly narrow, and terminates to a very slender point. **Stamens** 3, inserted in the base of the perianthium, and pressed close to the back of the stigma: *filaments* flat, and inserted in the base of the anthers, which are linear, 2-lobed, and burst in front to discharge their yellow pollen. **Style** short. **Stigmas** 3, deeply 2-cleft, keeled on the inside, and hollow at the back, lacerately-sawed at the margins: *segments* spreading right and left,

sharp pointed. *Capsule* oblongly-elliptical, tapering considerably towards the base, and a little towards the point; it is now nearly ripened, and is rather more than an inch and a half in circumference in the largest part, and an inch and a quarter in length.

Our drawing of this singular plant, which has now flowered with us for the first time, was brought to us from Naples, by Mr. Charles Ridgway, under the name of *Iris tuberosa*, but as we had another very different species at the same time, we were certain that they could not be the same; and we now believe there are several other species confused under that name, from the short description “foliis tetragonis” being given to them all; but there are three very distinct species easily recognised, by their foliage, roots, form of the 3 large segments of the flowers, and also of the 3 small ones; another is figured in “*Swertius Florilegium*,” which is apparently a fourth, that is taken up also by Morison.

At the time we were supplied with the tubers of this plant, by Mr. C. Ridgway, about three years ago, we received, at the same time, several other bulbs and tubers from him; the greater part of those are now growing in our garden, in a south border, where they are protected by a mat in Winter. *Narcissus neglectus* flowered with us this Spring, which was one of them.

2. *H. repens*. *Creeping-rooted Snake's head*, perianthii segmentis exterioribus apice rotundatis integerrimis: interioribus minimis setaceis uncinatis inclusis, foliis tetragonis acutis scapo longioribus, spatha unica lanceolata ventricosa.

Iris tuberosa. *Sibthorp. Flor. græc. v. 1. t. 41. Redoute liliac. t. 48.*

Habitat in *Arcadia et in Agro Eliensi*. Sibthorp.

Root tuberous, fingered, white, 2 at the base of the plant like small fingers; from this proceeds a runner, densely covered with shaggy chaff, terminated by several smaller tubers, so that by this means it must encrease very fast. *Stem* or *scape* erect, about a foot in height, simple, leafy, and 1-flowered. *Leaves* tetragonal, acute, pale green, apparently about 18 inches in length? *Radical sheaths* membranaceous and cracking, surrounding the leaves and scape, dilated at the base of the stem, somewhat inflated, and alternate. *Spathe* 1-glumed, lanceolate and ventricose. *Flower* terminal, nearly erect, pale green, inflated: *Perianthium* segments, on the exterior not bearded, apex broad and rounded, of a brownish black; interior ones very small, broadest near the base, ending in a very slender point, that is hooked, and inclosed, yellowish: tube filiform and elongated. *Stamens* 3, pressed close to the back of the stigmas, yellow. *Style* yellow. *Stigma* greenish yellow; segments bifid and repand.—*From Flora Græca description and figure translated into English.*

2. *H. bispathaceus*. *Common Snake's-head*, foliis angustis glaucis tetragonis, floribus bispathaceis.

Iris tuberosa. *Curt. bot. mag. t. 531. Link enum. v. 1. p. 480. Smith herb. in coll. Linn. soc.*

Root tuberous, 2-fingered: *Leaves* very narrow, glaucous, about a foot or more in length. *Spathes* 2, or 2-glumed, surrounding the peduncle, ovary, and tube of the flower; outer segments cuneate, retuse; the inner small segments, very slender at the base, and widening upwards, the sides clasping inwards, tapering to an elongated taper point, capsule rounded, tapering to the base like a pear.

The generic name is derived from *ερμιας*, Mercury, and *δακτυλον*, a finger, from the roots resembling fingers.



1. The 3 small Segments curved inwards at the base and a considerable way up, to show their cucullate form, terminated abruptly to a long slender point. Stamens 3, attached to the base of the Perianthium, from whence they grow, the anthers pressed close to the Stigma. 2. Short Style, with the 3 long cleft Stigmas; one only shown full size, to show its cleft Stigma; the other 2 cut off near the base, where they are a little fringed. 3. Ovary nearly full grown.



SANGUINARIA grandiflora.

Large-flowered Puccoon, or Bloodwort.

Linnean Class and Order. POLYANDRIA MONOGYNIA.

Natural Order. PAPAVERACEÆ. *DC. syst. veg. nat. v. 2. p. 69.*

SANGUINARIA. *Sepala* 2 ovata, concava, petalis breviora, caduca. *Petala* 8 (v. 12.) oblonga, alterna interiora angustiora. *Stamina* 24 v. 36. : *filamentis* filiformibus : *antheris* linearibus bilocularibus basi insertis. *Ovarium* 1, oblongum, compressum ; stigmatibus crassiusculo bisulcato persistente coronatum. *Capsula* bivalvis, oblonga, utrinque acuta, valvis deciduis, placentis 2 persistentibus.—*Herbæ* (Boreali-Americana) *succo sanguineo fæta*, radice perenni ad collum à gemmâ bivalvi folium unicum v. binum scapumque uniflorum quotannis agente.

Truncus subterraneus, vulgò Radix, est aeris narcoticus, etiam emeticus, externè applicatus escaroticus, a medicis Americanis sæpè et feliciter adhibitus. Confer *Schæpf. med. amer. bot.* 85. *Smith trans. lond. med. soc.* 1. p. 179.

8. *grandiflora*, foliis reniformibus basi spathacels glaucescentibus subsseptemlobatis reticulato-venosis : supra glabriusculis : subtus pallide rubentibus ; lobis basi rotundatis ; 3 superioribus trilobis ; inferioribus sublobatis obsoletè lato crenatis, sepalis ovatis concavis apice retusis rubentibus, petalis octo elliptico-ovatis obtusis concavis basi breve attenuatis stellato-patentibus.

Sanguinaria grandiflora. *Rosc. flor. illus. seas. t. 8. Swt. hort. brit. edit. 2. addend. p. 585.* See PAPAVERACEÆ.

Root tuberous, variable in form, branching round in various shapes and sizes, oblique or horizontal, filled with foetid juice, of a red colour. *Real roots* fibrous, slender. *Leaves* about 3 inches or rather more across from the base, and 2 long from the petiole to the end : proceeding direct from the root, always 2 in the present species, the scape raising between them : reniform or kidney-shaped, generally 7-lobed, glaucescent on both sides, reticulately veined : a strong vein proceeding up each lobe from the pedicle : upper side somewhat glabrous ; under one more or less tinged with red ; when young, the leaves, footstalks, and buds, are all quite of a red colour, which distinguishes it from the other two species with which we are acquainted : 3 upper lobes more or less 3-lobed, the opening between them broad, and rounded at the base, generally entire : lower ones broad, more or less lobed, or thinly notched with broad shallow rounded notches. *Petioles* or leaf-stalks, rounded below, tapering upwards, slightly flattened, but not furrowed where it is connected to

the leaf, pale red. *Scape* extending above the leaves, round, pale red, leafless, terminated by a large starry white flower, when exposed to the sun. *Calyx* of two deciduous sepals, which drop off as soon as the flowers expand: *sepals* ovate, concave, obtuse, and slightly notched at the point, of a beautiful rose-colour when young, but continuing to become paler as they increase in size. *Petals* 8, broadly elliptical or oval, tapering from a short way up to the base, and rounded at the points. *Stamens* 24, in 8 sets, generally 3 in a set; *filaments* filiform, variable in length, inserted into the base of the anthers: *anthers* linear, 2-celled, and opening longitudinally for the exclusion of the yellow pollen. *Ovarium* sessile, somewhat flattened on each side, tapering at both ends, glaucous. *Stigma* cleft at the point.

Our drawing of this fine species of *Sanguinaria* was taken from a plant sent us by Mrs. Roscoe, of Toxteth Park, near Liverpool: it was first introduced by Mr. J. Lyon, from Carolina, about the year 1812, under the name that we have adopted: it is also published by the same name by Mrs. Roscoe, in her *Floral Illustrations of the Seasons*. Owing to the cold weather this Spring, our plant did not produce such large flowers, as it generally does; and our artist never saw them in a perfect state, so that the figure is not so good as it ought to have been.

This species is chiefly distinguished from the others, by its leaves, petioles, and flower buds being of a bright purplish red, when they first arise from the root, and some time after, the veins at the back of the leaf, and the scapes, continue their redness, and the leaves are of a very different form from the other species; it also produces the scape between the two leaves, with the bractes enclosing them at the base; the other species bears but one leaf for each flower, both of which are enclosed together by 2 bractes, one of the bractes shorter than the other; the other species have broader and shorter leaves, and are very pale coloured, never the least tint of red in them; they are also much more glaucous, and their lobes altogether different; the flowers, stamens, ovariums, and stigmas, are all very different in each other.

According to Linnæus, the generic name is derived from the Latin, *succus sanguineus*, from the red or orange-coloured juice which proceeds from the root, and the footstalks of the leaves and scapes when broken.



1. The two deciduous Sepals that form the calyx, and fall off when the flower expands. 2. Stamens showing their different lengths, and the filaments inserted in the base of the anthers. 3. Ovarium somewhat flattened, terminated by a 2-cleft Stigma.





RHODODÉNDRON álbúm.

White Nepaul Rhododendron.

Class and Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICÆÆ. *D. Don prodr. flor. nepal. p. 148.*

Subordo III. RHODORACEÆ. *D. Don loc. cit. p. 152.*

Sect. I. RHODODENDRA. *Corolla campanulata aut subrotata. Stamina 10.—Frutices v. Arbores, sempervirentes aut rarissime subdeciduis; ramis glabris v. pulverulento-pubescentibus, raro hirsutis. Folia coriacea, oblonga, ovata, v. elliptica, glabra aut subtus subtomentosa. Flores corymbosi, speciosi, coccinei, rosei, purpurei, lilacini, albi aut lutei.*

RHODODENDRON. *Supra folia 10. series 2. vol. 1.*

R. álbúm, subarborescenti, petiolis rugulosis, foliis rigidis coriaceis: supra rugosis atroviridibus: subtus cinnamomeo-ferrugineus obtusiusculis basi rotundus, umbellis congestis multifloris, bracteis numerosis concavis ovatis v. oblongisve erectis, calycibus brevissime 5-lobus, floribus campanulatus inflatus; intus rugulosus, profunde 5-lobus: lobis undulatis patentibus, filamentis alternis appendiculatis.

Rhododendron álbúm. Hamilton Mss. in Herb. Lamb. et D. Don prodr. flor. nepal. p. 154.

A rugged shrub, or small tree, clothed with uneven cracked bark. *Branches* more or less spreading, the terminal shoot generally erect, of a glossy brown colour, before they become too old; when the young shoots first begin to grow in Spring, they are clothed at the base with numerous bractiform scales; the lower ones smallest, quite rounded and concave, and of a hard rigid substance; those become gradually larger and narrower upwards, but continue rigid and concave a considerable way up; but higher up the stem they begin to become more inclining to membranaceous, with their sides folded inwards, and are more or less lanceolate, bluntish or acute; the upper ones quite membraceous and the longest of the whole, clothed with a short tomentum, as are the young branches at that time, but this wears off as they become older; and they are then clothed with a brownish bark. *Leaves* when in a young state and first unrolling themselves, are rolled back so near the midrib that they hide their under surface; they are then clothed with soft woolly pubescence, as is also the petioles; but this wears off when they become older, the leaves become smooth and the petioles rugged: *old leaves* rigid, of a stiff leathery consistence, blunt at the point, rounded at the base, of a dark blackish green on the upper side, which is deeply channelled down the midrib, as are also the veins which spread from there towards the margin, and with the reticulation of the small veins, it causes a prominent rugulose

appearance: underneath strongly veined, of a cinnamomeous or ferrugineous colour. *Umbel* compact, many-flowered, the flowers in a close head, before the flowers expand, surrounded by bractes of different forms and sizes, those are all erect in our plant, and closely imbricate, not recurved at the points, as in the true *R. arboreum*; lower ones hard and rigid, blunt at the points, ovate and concave, as is also the next set, which terminate in sharp points, upper ones membranaceous and elongated, all deciduous, or falling off soon after the flowers are expanded. *Pedicles* rather more than half an inch in length, clothed with a woolly pubescence. *Calyx* shortly 5-lobed, also pubescent. *Corolla* of a pure white, campanulate, inflated, spotted with numerous spots on the inside, of a beautiful purple, tinged with red: segments 5 and sometimes increased to 6, spreading, sometimes a little crumpled at the margins, 2 upper ones emarginate at the points; lower ones smaller, flat at the points. *Stamens* 10, in the 5-cleft flowers, in the 6-cleft ones 12: *filaments* inserted in the calyx, variable in length, every other one bearing 1 or 2 hooked or straight appendages near the base, the lower ones longest, declining, their points ascending; white, smooth and glossy: *anthers* 2-lobed, bursting at the points for the exclusion of the white pollen, attached by their backs to the filaments. *Ovarium* clothed with white silky wool, 10-celled on the 5-cleft, and 12-celled on the 6-cleft ones. *Style* smooth, white. *Stigma* capitate, pale red, crenulate.

Our drawing of this handsome plant, was taken in April last at the garden of the Apothecaries' Company at Chelsea; it was raised from seed by Mr. Anderson several years ago, but has now flowered for the first time; there are now, May the twentieth, some flowers still remaining on it; Mr. D. Don agrees with us, in considering it a distinct species, as it differs from *R. arboreum* by its rigid coriaceous foliage, and their rugged dark green surface, and bright cinnamon or rusty colour underneath; it also differs essentially, in the bractes that surround the flowers, being straight and erect; not reflexed as in *R. arboreum*; but the most distinguishing character is, its bearing an appendage on every alternate filament a little above the base, sometimes one on each side. This species was first discovered by D. D. Fran. Hamilton, at Narainhetty, on a mountain by itself, on the third of March, 1803, by the mark on the specimens.

As the present plant is said to grow on a cold mountain, it will probably stand well in the open air, particularly if planted on a north border: we have been informed by the Rev. T. Garnier, of Bishop's Stoke, near Winchester, that he has plants of *R. arboreum* in a north border that have succeeded without any covering, and have not been at all injured.

For the derivation of the generic name, see *Supra*, folio 10, series 2, vol. 1.



1. Short 5-lobed Calyx. 2. The 10 Stamens, every other one simple, and the others with one or two appendages a little above the base, the greater part cut off, there not being room for the tops. 3. The woolly 10-angular Ovarium, terminated by the Style and rugulose Stigma.



Euphorbia 22

Subsp. integrifolia July 1881.

RIBES speciosum.

Fuchsia-flowered Gooseberry.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. GROSSULARIÆ. DC. *prodr.* 3. p. 477.

RIBES. L. *Calyx* 4-5-fidus. *Petala* 4 v. 5. *Stamina* totidem, alterna. *Styli* 2, plùs minùsve connati. *Bacca* infera, unilocularis, polysperma. *Semina* arillo succulento obvoluta, funiculis umbilicalibus elongatis supernè raphi adnatis placentis 2 parietalibus insertis suspensa. *Embryo* minutus, inversus, in apice albuminis densè carnosì, magni. *Frutices inermes v. aculeati*. *Folia alterna, petiolata, exstipulata, oblata, incisa*. *Flores racemosi v. sub-solitarii, bracteolati; quandoque 4-fidi, 4-andri, rariùs 6-fidi, 6-andri*. *Bacca pulposa, calycis limbo persistenti coronata*. D. Don Mus.

Tribus IV. *Calycibus tubulosis 4-5-fidis, petalis involutis, stylis ferè omninò connatis. Frutices aculeis tripartitis, ramisque setosis, pedunculis paucifloris, floribus speciosis puniceis, baccis hispidis*. Robsonia. Berl.

R. speciosum, ramis setosis, aculeis triplicatis, foliis glabris, calycibus 4-fidis tubulosis, genitalibus longè exsertis, baccis hispidis. D. Don Mus. *Ribes speciosum*. Pursh *fl. amer. sept.* 2. p. 731. in *suppl.* DC. *prodr.* 3. p. 478.

R. stamineum. Smith in *Rees's cycl. in loco*. DC. L. c. 3. p. 477.

R. fuchsioides. Berl. *mem. soc. phys. gen.* 3. t. 3.

Frutex erectus, ramosissimus, aculeatus, 5-pedalis. Rami virgati, cortice cinereo, setis glandulà depressà capitatà coronatis, inæqualibus copiosius vestiti. Aculei (folia mutata) 3, rarò 5, alares, subulati, rectissimi, basi callosà coadunati, statu juvenili cum setis sanguineo-colorati; lateraliùs porrecto-divergentibus, semuncialibus; medio paulò longiori. Folia alterna, petiolata, circumscriptione subrotundo-ovalia, 3 v. 5-loba, subseptemnervia, nervis lateraliibus 3 basi coadunatis, utrinque gramineo-viridia, concoloria, adprimùm petiolisque parcè glandulosa, sesqui v. bipollicaria; adulta glabra, nitidissima: lobis cuneatis, inciso-serratis; intermedio subtrilobato: dentibus obtusis, abruptè mucronulatis; in plantà juvenili folia majora, cordata, v. basi transversà oblata, profundè triloba, magisque incisa, dentibus acutioribus. Petioli filiformes, unciales, suprà canaliculati, basi crassiori. Racemi e basi ramulorum nondùm evolutorum solitarii, pedunculati, penduli, pauciflori. Flores plerumque 3, rariùs 5 v. 7, nunc sub-solitarii, punicanti-coccinei, pulcherrimi, nitidi, omnium maxim, Fuchsiani quodammodò referentes. Pedunculi filiformes, glandulosi (glandulis innocuis) punicei, unciales v. sesquiunciales. Pedicelli cum ovariis copiosè glandulosi, apice parùm crassiores. Bracteolæ latiusculæ, ovatæ, acuminatæ, concavæ, membranacæ, nervosæ, flori concolores, pedicellis longiores. Calyx 4-fidus, glandulosus, semuncialis: segmentis ligulatis, obtusis, marginibus parùm incurvis, subinde canaliculatis, basi latiori. Petala 4, segmentis calycis duplò breviora, iisdemque alterna, cuneiformia, vix ac ne vix obversè cordata, apice truncata, emarginata, parùm erosa, marginibus involutis: nervis 5, pallidioribus. Stamina 4, basi calycinarum laciniarum inserta, longè exserta, calyce plerumque ter longiora: filamenta capillaria, glabra: antheræ basi insertæ, innatæ, biloculares, atrosanguinæ: loculis

parallelis, connatis, turgidis, intùs longitudinaliter dehiscentibus. *Pollen* farinaceum, luteum. *Ovarium* depresso-globosum, undique glandulosum, uniloculare : *disco epigyno* carnosò, viridi, nectarifero. *Styli* 2, ferè omninò connati, filiformes, glabri, staminibus parùm præcellentes, apice tantùm soluti. *Stigmata* parva, truncata, pruinosa. *Bacca* (testante amiciss. D. Menzies) magnitudine *Grossulariæ hortensis*, sphærica, atrosanguinea, undique hispide setosa. *D. Don Mss.*

By far the most showy of this group of *Ribes*, having the entire habit of the gooseberry, yet vying in the form and brilliancy of its flowers with the elegant *Fuchsia*. It is one of the many interesting discoveries of our venerable and much valued friend Mr. Menzies, who collected specimens of it in California, during the voyage of Vancouver. The plant had also been gathered about the same time by Sessè and Mocinno, two Spanish Botanists attached to the expedition for exploring the vegetable riches of Mexico. To Mr. Collie, F.L.S. Surgeon to H. M. Ship Blossom, in the late voyage of discovery under Captain F. W. Beechey, we are, however, indebted for its first introduction to the gardens, and from seeds collected by him at Monterey in California, a single plant was raised by Mr. Lambert in 1829. The plant was shortly afterwards placed in the open ground, where it is found to thrive luxuriantly, it being now a large bush, five feet in height. It blossomed for the first time in the beginning of May last, and has continued in flower for more than six weeks. Its profusion of large, crimson, glittering blossoms, contrasted with the bright green, glossy leaves, form one of the most beautiful objects imaginable. The trivial appellation of *speciosum* given to it by Pursh, must supplant, agreeable to the regulations established in botanical nomenclature, the more recent but happier one of *stamineum*, applied to the species by the late Sir J. E. Smith. Another and evidently nearly related species, of which specimens were also collected in the same country by Mr. Menzies, the *Ribes Menziesii* of Pursh, the *ferox* of Smith, has the flowers five cleft and pentandrous, the stamens not exceeding the calyx in length, and the anthers terminated by a short point. In *R. gracile* and *hirtellum* the flowers are occasionally four cleft and tetrandrous, and the stamens in the former project beyond the tubular calyx, and the styles in both are united nearly their whole length; so that I am even sceptical as to the claims of *R. speciosum* and *Menziesii* being regarded as constituting a separate section. The old division of the genus into currants and gooseberries is perhaps, after all, the most natural. The north-west regions of America abound in showy species of this genus, the *R. aureum* and the more recently introduced *R. sanguineum*, the *malvaceum* of Smith, both belonging to the group of currants, being also natives of that country. The albumen is fleshy, not horny, as stated by Jussieu and De Candolle, and the embryo is situated at the apex of the seed close to the chalaza, and is consequently inverted. The situation of the embryo, the presence of umbilical cords, and the fleshy arillus enveloping the seeds, as in *Punica*, are the chief marks which distinguish the *Grossulariæ* from the *Saxifrageæ*, to which they approach in the structure of their flower, in their glandular pubescence, and in the insertion of the leaves. *D. Don Mss.*

For the derivation of *Ribes*, see supra fol. 109. series 2.



1. Flower spread open, to show the 4 segments of the calyx in which the 4 stamens are inserted; 2 of them bent round from the base, and passing up through 2 of the petals; the 4 petals alternate with the segments of the calyx, and involute. 2. Ovarium covered with glandular hairs on the outside, terminated with a slender red style, and small slightly forked stigma.



THALICTRUM anemonoides.

Anemone-flowered Meadow-Rue.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *DC. reg. veg. syst. nat. 1. p. 127.*

Tribus II. ANEMONE. Calycis corollæque ætivatione imbricata. Petala 0 aut plana. Carpella 1-sperma indehiscentia in caudas mucronesve sæpius desinentia. Semen pendulum.—Folia radicalia aut alterna.

THALICTRUM. Calyx 4-5-sepalus, sepalis ovatis petaloideis aut membranaceis caducissimis. Stamina numerosa. Ovaria 4-15. Styli breves. Cariopsides nunc costis elevatis longitudinaliter instructæ, nunc triangulares angulis alatis, nunc inflatæ subvesicariæ. Embryo minimus ovatus, cotyledonibus approximatis.—Herbæ perennes. Radices flavescentes, fasciculatæ, fibris nunc cylindricis tenuibus (fibrosæ); nunc crassis obovatis (grumosæ). Caulis annuus erectus sæpius fistulosus. Folia sæpiissime petiolo ramoso ternatum secta, rarissime indivisa, semper alterna basi dilatata. Flores aut corymbosi, aut paniculati, aut subracemosi, herbacei aut albi aut flavi coloris. Virtues. Herbæ sæpius foetida, radices amari flavicantes, ad colorem luteum olim tinctoriæ, purgantes (præsertim *T. flavi*) tonicæ et rhabarbari subæmulæ. *DC. reg. veg. syst. nat. 1. p. 168-169.*

Sect. IV. GRUMOSA, radicibus grumosis, sepalis petaloideis stamina superantibus.

T. anemonoides, radice grumosa, floribus umbellatis, foliis floralibus petiolatis biternatis sectis involucrum constituentibus. *DC. reg. veg. syst. nat. 1. p. 186.*

Thalictrum anemonoides. *Mich. flor. bor. amer. 1. p. 322. DC. prodr. 1. p. 15. Swt. hort. brit. edit. 2. p. 3.*

Anemone thalictroides. *Linn. sp. 763. Mill. dict. n. 8. Juss. ann. mus. 3. p. 249. t. 21. f. 2. Willd. spec. 2. p. 1284. Hort. Berol. 1. t. 44. Pursh flor. amer. sept. 2. p. 387.*

Habit and frond-like, as in *Isopyrum*, flowers disposed as in *Anemone*, fruit of *Thalictrum*. Roots black and grumose, tubers 2-3 obovate, very blunt, intermixed with the very slender fibres. Stems erect, slender, a span high, simple and naked. Radicle leaves on long footstalks, which are divided into 3 segments at the point; the segments ovate, 3-toothed, cordate at the base. Floral leaves 2, opposite, the petiole nearly 3-parted to the base, the segments ovate, 3-toothed, glaucescent: on footstalks in a sort of whorls, ovate, and 3-toothed, constituting an involucrum. Pedicels 5 to 6, umbelled in var. α ., in var. β . one-flowered. Sepals varying in number from 5 to 7, spreading flat, obovate, white,

blunt, longer than the stamens. *Stamens* numerous, variable in length. *Carpells* oblong, not tailed, nerves prominent, striated. *Stigma* a simple little flat head.

Our drawing of those two varieties was made last Spring, from two plants sent us by the kindness of our respected friend, Mr. Leeds, of Manchester, to whom we are much obliged for many presents which he has bestowed upon us, in sending us plants and specimens.

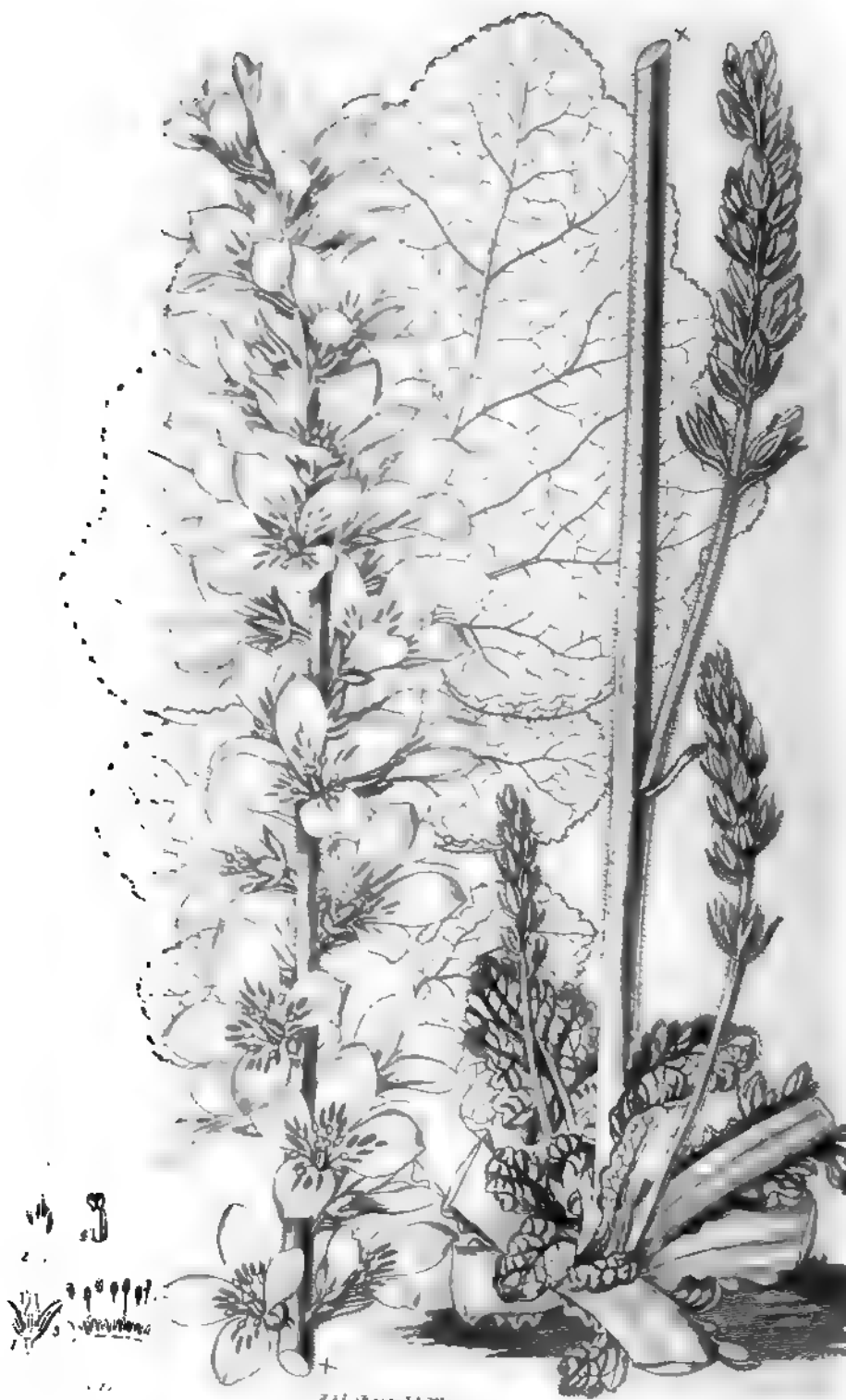
The present species is very distinct from any other of the same genus, and probably should form a new one, but as it is so nearly related to *T. tuberosum*, and *T. petaloideum*, which also bear coloured sepals, it is by those connected to the other species, some others of which have their sepals somewhat petaloid; it is therefore best to keep it in the genus, where it is placed by Michaux and De Candolle, because the seeds agree with that genus; and that is always the most decided character: the radical leaves were produced at the same time as the flowers this Spring, so we were supplied with them, and enabled to publish them, which we could not till now, as they produced no radical leaves last year, nor could we find any in Pursh's Herbarium, or any other that we examined: the single ones were produced from the same plant, as the flowers; but we are obliged to Mr. Low, of Clapton, for those on the double, the slugs in the wet weather having eat all ours up. Mr. Low's plant bore flowers 3 times the size of ours; but that may be accounted for, as his had only 2 or 3 flowers on a scape, and ours has so many, and were not drawn when full grown, but before, as may be seen by their greenness.

The present plants thrive best in a light sandy soil, either peat, or that mixed with sandy loam; in the last the flowers appear to come larger, they require a shady situation: we have read an account of an American collector, who said they grew in sandy woods, all consisted of sand and rotten wood and leaves, and that if you only pulled a single leaf, the whole plant came up. Native of various parts of North America.

The generic name is derived from *θαλλω*, to flourish or abound with, or *εθαλλε*, abundantly produced, and *λικνον* or *λικμος*, the mystic name of Bacchus, a cradle; on this was laid; when born a child, to ensure future affluence; from the amazing quantity of flowers produced by the *Thalictrum*'s.



1. Stamen. 2. Carpella seated on the receptacle. 3. A single Carpel.



Fl. Fr. - Botanical July 20th

20.26.7.2

FRANCOA appendiculata.

*Naked-stalked Francoa.**Linnean Class and Order.* OCTANDRIA MONOGYNIA.*Natural Order.* GALAGINÆ. *D. Don in Edinb. phil. journ. Dec. 1828. p. 53.*

FRANCOA. Cav. *Calyx* 4-partitus, regularis. *Petala* 4, æqualia, calycinis segmentis alterna. *Stamina* 16, distincta; alternis omnino castratis. *Antheræ* biloculares, longitudinaliter dehiscentes. *Ovarium* 4-loculare: ovulis erectis, numerosissimis. *Stigmata* 4, dilatata, obtusa, crassa, pruinosa, basi connata, valvulis capsula alterna. *Capsula* (è folliculis 4, angulis interioribus connatis petalisque oppositis composita) 4-locularis, apice foraminibus totidem dehiscens, polysperma. *Semina* scobiformia, marginibus valvarum interioribus replicatis inserta: testâ exteriori membranaceâ, laxâ; interiore suberustaceâ, fuscâ: albumen copiosum, carnosum, album. *Embryo* minutus, teres, in basi albuminis erectus. *Radicula* brevissima, obtusa. *Herbæ* (Chilenses) perennes: pilis simplicibus, deciduis. *Folia* lyrata, ferè Rapi, reticulatim venosa: lobis rotundatis, dentatis; terminali maximo, cordato, obtuso, sinuato-dentato: dentibus glandulâ terminatis. *Flores* terminales, copiosè spicatis racemosi: quandoque 5-6-fidi, staminibus 20 v. 24, et stigmatibus 5 v. 8. *Pedicelli* uniflori, basi bracteolâ lanceolatâ, ipso longiore multifli. *D. Don Mus.*

F. appendiculata, acaulis; foliis petiolatis, scapo subsimplici, laciniis calycinis lanceolatis acuminatis, stigmata lobis cuneatis emarginatis.

Francoa appendiculata. Cav. in anal. de vien. nat. 4. p. 237. Icon. 9. p. 76. t. 500. *D. Don in l. c. p. 52.*

Herba perennis, pilis mollibus, brevibus, simplicibus, copiosè vestita, holosericea. *Radix* fibrosa. *Scapus* è foliorum medio plerumque solitarius, erectus, simplex, v. rarè ramosus, pube copiosâ undique velutinus, solidus, cylindraceus, apicem versus gradatim attenuatus, cubitalis tripedalisve, et ultra, digiti minoris ferè crassitie, quandoque folio uno alterove ornatus. *Folia radicalia* plurima, breviter petiolata, erecto-patentia, lyrata, viridia, spithamea: segmentis subrotundo-ovatis, sæpè concavis, inæqualiter dentatis, subserratis, undulatis, reticulato-venosissimis, suprâ rugosis, subtùs leviter varicosis, purpurascensibus; terminali maximo, cordato-oblongo, subcucullato, margine sinuato-lobato, ac dentato, sæpè palmari: dentibus glandulâ callosâ terminatis; caulina (adiut tantùm in scapo ramoso) simplicia, ovato-lanceolata, dentato-serrata, multò minora. *Racemus* spicatus, terminalis, laxis, erectus, spithameus. *Flores* sparsi, breviter pedicellati, undique versi. *Pedicelli* teretes, 3 lineas longi, densè pubescentes, submentosi. *Bracteolæ* ad pedicellorum bases solitariae, quibusque ter longiores, lineari-lanceolatæ, acuminatæ, costâ subtùs prominuulâ carinatæ, villosæ. *Calyx* 4, v. rarè 5-partitus: segmentis lanceolatis, acuminatis, trinerviis, pubescentibus. *Petala* 4, rarè 5, segmentis calycinis alterna, isdemque duplè triplève longiora, spathulata, mucronulata, æqualia, rosea, disco maculâ oblongâ puniceâ intensius colorato, ungue lutescenti, flabellato-nervosa: nervis basi connatis, superne diffusè pinnatimque ramosissimis, distinctis, nec reticulatis. *Stamina* 16, v. rarè 20 v. 24; fertilia 8 v. 10, subæqualia, filamentis setaceis, glabris, calycis longitudine; alternis omnino castratis, crassioribus, 4-plò brevioribus, compressis, obtusis, glabris. *Antheræ* biloculares, oblongæ, subtrigonæ, flavæ: loculis parallelis, connectivo perangusto, basi solatis, distinctis: valvulis saturâ longitudinali depressâ dehiscentibus. *Ovarium* ovato-oblongum, 4-gonum, 4-loculare, rarè 5-gonum, 5-loculare: ovulis in quoque loculo numerosissimis, adscendentibus. *Stylus* nullus. *Stig-*

mata 4, raro 5, nunc 6 v. 8, loculis ovarii numero æqualibus alterna, adprimùm connata, cuneiformia, plana, truncata, leviter emarginata, crassa, pruinosa, margine revoluta, basi connata. *Capsula* (è folliculis 4 v. 5, angulis interioribus connatis, petalisque oppositis composita,) 4-5-locularis, apice foraminibus totidem dehiscens, polysperma: *valvis* apice prominentibus, crustaceo-membranaceis. *Dissepimenta* è duplici margine valvularum introflexo constituta, crustaceo-membranacea. *Placentæ* duplicatæ, angustè lineares, complanatæ, marginibus interioribus valvularum longitudinaliter adnatæ, nunc demùm solutæ. *Semina* minuta, scobiformia, trigona, gilva: *testâ* *exteriore* membranaceâ, laxâ; *interiore* subcrustaceâ, fuscâ: *albumen* copiosum, album, carnosum. *Embryo* minutus, in basi albuminis erectus. *Radicula* brevissima, obtusa. *D. Don Mss.*

This remarkable and hitherto little known plant is one of the many interesting additions made to our collections by Mr. Anderson, the assiduous Botanist who accompanied our much esteemed friend Captain King in his recent voyage of survey on the coasts of South America. It was raised at the Clapton Nursery, from seeds collected by Mr. Anderson near the port of San Carlos de Chiloe, where the plant had been originally discovered by Don Luis Née, Naturalist to the Spanish expedition under the ill-fated Malaspina, and from whose Herbarium the materials were derived on which Cavanilles founded the genus. Two other species, namely *Francoa sonchifolia* and *ramosa*, described by me in the work above referred to, have also been recently introduced from seeds collected by Mr. Hugh Cuming, in Chile. The former is very nearly related to the present species, but the elongated caudex, and the rounded lobes of the stigma, appear sufficient to distinguish it. The plant appears to succeed well in the open border, where its tall clusters of rosy blossoms, marked with deep crimson, render it a conspicuous object. The *Galacinae*, at present consisting of *Galax*, *Francoa*, and *Tetilla*, form a small family intimately related to the *Saxifrageæ*, and peculiar to America. The curious genus *Tetilla* has all the air of a *Saxifraga*, and agrees with several species of that genus in the remarkable inequality of its petals. M. De Candolle, who has referred this genus to the *Saxifrageæ*, has overlooked the sterile stamens which are also present in it, and alternate with the fertile ones, as in *Francoa*, which the same distinguished Botanist has included among the *Crassulaceæ*. It is chiefly distinguished from *Francoa* by its irregular calyx, and by the inequality of its petals. The stigmata are two, and slightly cloven, but confluent at the base into a short style, and the ovarium (although I have only had an imperfectly developed specimen to examine) appears to consist of four cells, so that in the structure of these organs the genus does not materially differ from *Francoa*, which M. Adrian de Jussieu, who was the first to point out the real affinities of *Tetilla*, is disposed to regard as the type of a family distinct from *Galax*; but not having seen the paper of that acute and learned Botanist on the subject, I am ignorant of the reasons which have led him to this conclusion. In consequence of the specimens which I had to examine being very incomplete, several errors have unavoidably crept into my former description of the genus, which are now corrected. The genus was named by Cavanilles after Don Francisco Franco, a Physician of Valentia, who flourished at the commencement of the sixteenth century. He was author of several medical works, and an ardent cultivator and promoter of the science of Botany. The *Francoa sonchifolia* is the second species of Molina's genus *Panke*, the other being *Gunnera scabra*, from which his generic character has been principally derived. Every Botanist must rejoice at having the science rid of such unnatural associations. In the unexpanded flower of *Francoa*, the lobes of the stigma are connate, and in that state this organ resembles very much the stigma of *Galax*. *D. Don Mss.*



1. The deeply 4-cleft calyx, with its segments prominently 3-nerved. 2. Petal detached. 3. The 8 Stamens, every other one opposite to the petals, and the 4 alternate ones passing between them, and laying free on the calyx; 8 scales placed between the Stamens, which are sterile stamens. 4. The 4 Styles free, but united at the top by a 4-lobed Stigma.

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Pl. by J. Bailey July 1892

IRIS biflora.*Two-flowered Iris.**Linnean Class and Order.* TRIANDRIA MONOGYNIA.*Natural Order.* IRIDÆE. *Brown prodr.* 1. p. 302.*IRIS.* *Supra fol.* 11 et 58. *series* 11.

I. biflora, scapo leviter pruinoso 2-3-floro spathaceo-foliaceo foliis longiora : foliis radicalibus ensiformibus falcatis acutis atratis glaucis, segmentis perianthii oblongo-ovatis integris undulatis basi attenuatis violaceo-purpureascentibus : interioribus inflexis : exterioribus reflexis : tubo ovarii duplo longiore.

Iris biflora. *Linn. syst. veg.* 90. *Solander. hort. Kew. ed.* 1. vol. 1. p. 70. *Willd. spec. plant.* 1. p. 227. (*exl. Pallit. et omnia synonyma Ker!*) *Vahlenum.* 2. p. 132. *Pers. syn.* 1. p. 51. *Thunb. diss. Ir.* n. 6. *Ram. et Schult. syst.* 1. p. 462. *Ker irid. gener.* p. 57. (*exclus. syn. I. subbiflora Ker!*)

Iris bohémica. *Schmidt. flor. bohém.* n. 303. *Pohl flor. bohém.* 1. p. 47. *Schult. ostr. flor. edit.* 2. I. p. 104. *Ram. et Schult. syst. veg.* 1. p. 465. *Spreng. syst.* 1. p. 162!

Chamaeiris latifolia biflora. *Best. hort. cyst. vern. ord.* 8. f. 1.

Chamaeiris major saturatæ purpurea biflora. *Bauh. pinax.* 33.

Root perennial, tuberous, spreading considerably and branching. *Leaves* generally 5 on the leaf-shoots in the flowering season, all more or less falcate, some of them very much so, the longest 10 inches and a half in length, though they do not appear to be much above half that length, being so very falcate : the broadest about an inch in breadth, gradually becoming smaller downwards, glaucous and very strongly striated. *Scape* 2-or-3-flowered, clothed with short spathaceous leaves, which scarcely reach from one joint to the next, terminal flowers sometimes 2 from the same scape, but more generally one, also 1 from the bottom, and 1 from the side. *Spathe* 2-glumed, clasping each other, and the peduncle, ovary, and a good part of the tube, inflated about the middle, acute, the inner one longest, green, more or less marked with violet, particularly near the point. *Flower* of a purple violet. *Peduncle* longer than the ovary, nearly but not quite cylindrical. *Ovary* very short, about half the length of the tube, 6-lined, at first cylindrical, but soon becoming 3-sided. *Tube* of the *perianthium* green tinged with blue upwards, obtusely angular : 3 outer segments ovately obovate, rounded at the points, undulate, tapering to the base, but not so much so as the inner ones, from the base to the bend, and a little above, striped with white : from the base to the middle, clothed with a close line of white hairs, tipped with violet, and towards the end nearly altogether violet : 3 inner segments erect or bent a little inwards at

the top, considerably broader than the outer ones, much more undulate and crumpled, all notched at the point, ovately oval, very much attenuated at the base, the margins curved inwards, of a pale brown, striped with a darker brown. *Stamens* 3, *filaments* inserted in the mouth of the tube, flat and tapering upwards, white at the base, but becoming blue all the way up: *anthers* linear, 2-lobed, close-pressed to the back of the stigma, their fronts forward. *Style* short, triangular. *Stigma* deeply 3-parted, the segments petaliform, rather larger than usual, elliptic, keeled on the upper side and hollow below, points split down to the membrane, and lacerate at the points.

We first determined this plant to be the *I. bohémica* of Rœmer and Schulte's Syst. Veg. v. 1. p. 465, and of all the other authors above cited; by an observation there it was said that Marshall Bieberstein had given it as *I. biflora*; this observation induced me to go to Mr. Lambert's, and to compare it with Vahl's long description, with which it agreed in every point: I then went to the Linnean Society with Mr. D. Don, and we examined a good specimen of it in the Linnean Herbarium, which was so much like our drawing, that it appeared as if taken from that plant; the specimens that flowered at Mr. Anderson's this Spring were some 2-flowered, and others 3-flowered, some with the upper spathe bearing two flowers on the top, and one by the side, or at the lower part of the scape, the most general way they flowered, was one at the top, one at the side, and one at the lower part of the scape, as in our figure, and also in the Linnean Herbarium, one scape flowered in Mr. Anderson's garden at Chelsea, with one flower on the top, and two at the base, we had two plants flowered in our Garden precisely like the figure.

Vahl's specific description is better than that of Linnæus; he describes the plant 2-3-flowered; and Linnæus 3-flowered; Linnæus's name was most likely derived from the 2 upper flowers, from the same spathe, that being very frequent.

We believe no author has ever known the Linnæan *I. biflorus*, since Vahl, till now; Sir J. E. Smith must have known it, but probably never saw it alive; Mr. Ker has confused it with 2 or 3 others, and in his last edition of "Iridearum Enumeratio" he has given it as *I. subbiflora*! a species to which it is not in the least related: we are therefore now much pleased to clear up all the mistakes for our readers.

Our drawing was taken from the Apothecaries' Garden at Chelsea, in May last; it continues producing a quantity of flower scapes, from the beginning of April till the middle of May. Mr. Anderson found out that he had first introduced it in the year 1826 under the name of *I. bifrons*. We have also made out the *I. biglumis* this Spring by the description of Vahl and Pallas's figure: it also flowered at Mr. Anderson's, but the snails destroyed every flower of it, except the first, so that we could not procure a perfect figure this season. The present species is a native of Portugal, certain; it also appears to be from Bohemia, and a Province of Russia.

Several other fine species we have found out, by comparing them with different figures and descriptions, many of which have been confused with others, but we have no more room at present, but will say more under the next species we publish. In the next we publish we will give Mr. Ker's generic description.

For the derivation of the Generic name, see folio 11. of this series.



1. The base of the Perianthium spread open, to see the insertion of the three Stamens. 2. Style terminated by the 3 spreading Stigmas, 2 cut off near the base, the other perfect.



173. 1. 182

Tab. 1. 1. 182

W. G. L.

TULIPA maleolens.

Unpleasant-scented Tulip.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. TULIPACEÆ. *Kth. synops.* 1. p. 202.

TULIPA. *Supra folio* 97, series II. vol. I.

Sect. I. Bulbis subsolitariis surpissimè divisis aut cumuloso-congestis : non repentibus : fibris filiformibus, densè congestis. Floribus solitariis sæpè colore variegatis. Perianthii segmentis acuminatis obtusisve, latis aut angustis, apice et basi plus minusve pilosis v. tomentosis, aut nudis.

To this section belongs the *T. Oculus Solis*, *T. Honorotiana*, *T. præcox*, *T. pubescens*, *T. Gemeriana*, which have been published before in our former numbers.—*T. turcica* belongs to the second section, with creeping roots, and is frequently confounded by foreign Botanists with *T. cornuta*; but the *T. turcica* of Roth is the Florentine Tulip, which, he observes, differs from *T. sylvestris* only in size.

T. maleolens, scapo foliis breviorè glabro, foliis oblongo-lanceolatis basi et apice attenuatis subundulatis glaucis marginibus ciliatis suprà canaliculatis subtùs subcarinatis, perianthii foliolis exterioribus longioribus ovatis v. ovato-oblongis acuminatis : interioribus elliptico-obovatis obtusis, maculâ baseos latè rhomboideâ emarginatâ.

Tulipa maleolens. Bertol. in litt. ad Schultes. Reboul. *Nonn. sp. Tul. not.* p. 9. in App. Schult. *syst. par.* 1. p. 376. 1829.

fl. *variegata*, floribus rubro-purpureis flavis stramineis cupreis et pallide-glaucis intermixtis.

Bulb pure white, sometimes partly covered with a glossy brown deciduous shell. *Leaves* clasping the scape, oblongly lanceolate, attenuated to the base and point, somewhat undulate, glaucescent, and ciliated on the margins: channelled on the upper side; and somewhat keeled on the lower. *Scape* slender, frequently 3-leaved, smooth and glossy, the points of the leaves frequently extending above the scape. *Perianthium* petaloid; three outer leaflets longest, ovate, or oblongly ovate, taper-pointed, of a pale brownish red colour on the outside, and slightly glaucous, edged with a pale orange or copper colour, inner side of a pale yellow, inclining to copper, marked at the base with a large rhomboid spot, of a pale green, emarginate on each side, and yellow at the base: three inner leaflets elliptically obovate, rounded at the points, and obtuse: channelled up the back,

and keeled on the upper side, both sides of a brilliant purple crimson colour, shaded with copper colour at the margins and ends, particularly so after having been three or four days in flower. *Stamens* 6: *filaments* broad at the base, tapering to the anthers, inserted at the base to a commissure between the ovarium and leaflets of the perianthium: *anthers* linearly oblong, inserted by their base into the very slender point of the filament, which causes them to be versatile, extending a little above the stigma: *pollen* dark purple. *Ovarium* 3-sided, at first pure white, changing to a pale straw colour. *Stigma* 3-lobed; lobes reflexed, channelled on the upper side, and pustulose.

The variety β . *variegata* differs chiefly from the species, in being of a more brilliant colour, and variegated with bright yellow, orange, rose-colour, or bluish glaucescent at the back. The flowers occur more or less variegated.

The species blossoms about the 14th of May, and continues to the end of the month. Our drawing was taken at the Botanical Garden, Chelsea, in May last. It requires the same treatment as other Tulips.

The generic name is already explained at folio 97, of the present series.



1. Stamen, showing the insertion of the anther, and the pollen on the anther. 2. Ovarium terminated by a 3-lobed stigma, which is fringed. 3. Root. 4. Outline of a leaf.





L. D. Macdonald, sculp.

Printed by J. Edgar, 1892

Macdonald sc.

RHODODENDRON *indicum*. var *Smithii*.*Smith's hybrid Indian Rhododendron.***Class and Order.** PENT-DECANDRIA MONOGYNIA.**Natural Order.** ERICÆÆ. *D. Don prodr. flor. nepal. p. 148.***Subordo III.** RHODORACEÆ. *D. Don loc. cit. p. 162.***RHODODENDRON.** *Supra folio 10. series II.*

Sect. III. TSUTSUSI. *Calyx* 5-partitus: segmentis longis patentibus v. erectis acutis. *Corolla* tubulosa, rotata, 5-partita: segmentis patentibus. *Stamina* 5-8 v. 10: *filamenta* inæqualia, inferne pilosa, erecta aut apice ascendentia.—*Frutices* erecti aut patentes, ramosi, sempervirentes aut subdecidui: *ramis* virgatis, junioribus pilosis. *Folia* hirsuto-strigosa. *Flores* terminales, solitarii aut gemini.

R. indicum, floribus terminalibus subbinis, ramis strigosis erecto-patentibus gracilibus ad anthesin pendulis, foliis elliptico-lanceolatis basi et apice attenuatis strigosis, dentibus calycinis elongato-lanceolatis ciliatis patentibus.

Rhododendron indicum. *Swt. hort. brit. edit. 2. p. 343. n. 29. Brit. flor. gar. ser. II. t. 128.*

Azalea indica. *Linn. sp. pl. p. 214. Willd. spec. plant. 1. p. 831. Botan. magaz. t. 1480.*

For the other synonyms, see fol. 128 of the second series.

γ. *Smithii*, Flowers of a rosy-salmon-colour, large and spreading, expansion 2 inches and a half to 3 inches: spots darker: tube half an inch in length: stamens 8, scarcely bent upwards at the point: style much longer than the stamens: leaves dark green.

Stems erect: *branches* spreading, slender, strigose, thickly clothed with rigid brown hairs, which lay prostrate on the stem; pendulous, when in flower, from their weight. *Leaves* on short footstalks, that are flattened on the upper side: *lower ones* ovate, tapering to both ends: *upper ones* elliptically lanceolate, acute; all clothed on both sides with decumbent hairs, particularly on the nerves and margins, many of these wear off when they become older: *young leaves* and stems densely clothed with white silky hairs. *Flowers* in pairs, terminating the branches, pale rose or salmon colour, clothed with long soft hairs. *Peduncles* scarcely half an inch in length, also clothed with closely pressed chaffy hairs. *Scales* at the base of the peduncles linear, thickly clothed on both sides with bright brown hairs. *Calyx* deeply 5-cleft,

the segments broadest, and purple at the base, narrowly lanceolate, tapering to the point, spreading when the flower is expanded, covered with close-pressed hairs, and fringed with longer spreading ones. *Corolla* very large and spreading: tube half an inch, bluntly keeled at the back, and with four other keels, that are considerably smaller: expansion of the limb two inches and a half to three inches, deeply cloven into five parts: segments nearly of a size, broadly ovate or nearly oval, rounded at the end; the upper one, and the inner sides of the two next to it, spotted from near the base, to about half way up, with a sort of warted spots of a darker colour. *Stamens* 7 or 8, of different lengths, of a bright red: *filaments* clothed with short stiff hairs about half way up: *anthers* 2-lobed, attached by their back to the filaments. *Ovarium* covered with long white close-pressed hairs. *Capsule* 5-celled, 5-valved. *Placenta* single, with five angles. *Seeds* compressed, and winged. *Style* smooth, bright red, considerably longer than the filaments. *Stigma* a pustulose head.

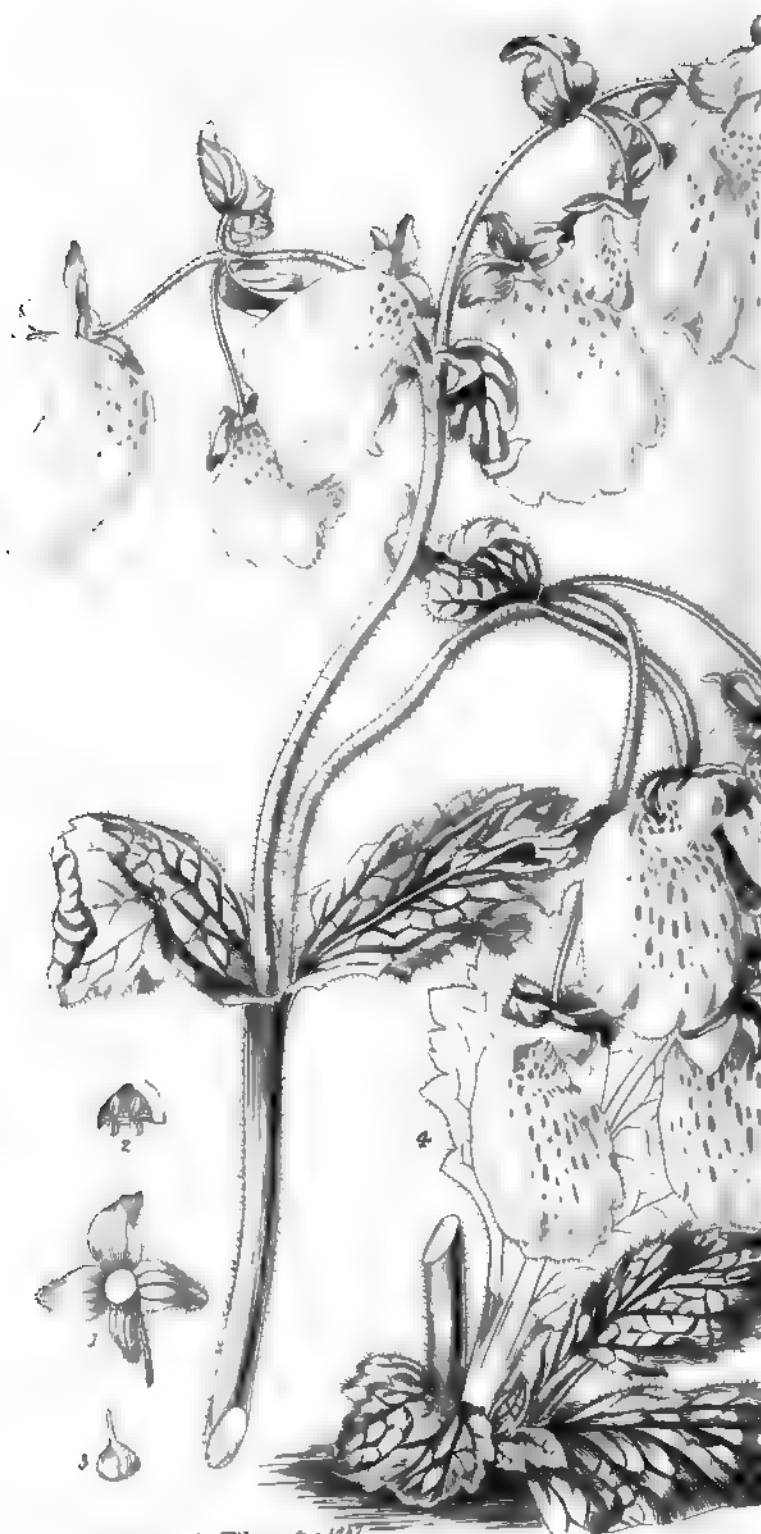
This splendid hybrid production is the offspring of *Rhododendron phœniceum*, that had been fertilized by *R. indicum*, and was raised by Mr. Smith, at Coombe Wood, in the Spring of 1828. It partakes of the characters of both parents, and like them is rather tender, but appears to be a more desirable plant than either; is of free growth, and produces its flowers in great abundance. Mr. Smith's success in this department of Horticulture is well known, his collection surpassing any thing of the kind we have seen.

For the explanation of the generic name, see folio 117, of the present series.



1. The Pedicle, to show that the upper part is purple, and every part very hairy, as well as the calyx. 2. Calyx purple at the base and green at the point, attenuated to a long point at the end, where it ends very sharp. 3. Filament, to show its hairiness, and the anther attached to its back. 4. Ovarium woolly. 5. Style smooth, and bent upwards. 6. Stigma capitate.





Epilobium *sp.* *det. J. E. Smith Aug. 1857*

CALCEOLARIA pëndula.

Large-Flowered Slipper-wort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr. v. 1. p. 433.*

Sect. II. STAMINA 2 ANTHERIFERA.

CALCEOLARIA. Supra folio 130, series II.

C. *pëndula*, herbacea; foliis latis oblongo-obovatis ovatisve inæqualiter serrato-dentatis supra pilosis inferioribus petiolatis: superioribus sessilibus acutiusculis, segmentis calycinis lato-ovatis quinquenerviis, corollæ labio inferiore maculato 5-crenato pendulo maximo.

Stem about 18 inches in height, of a purple colour at the base, and some way up the stem, the green beginning just above the fork of the branches, thickly clothed with spreading woolly hairs, that are very unequal in length, as are also those on the small branches, peduncles, and segments of the calyx. *Leaves* from the root, and a little way up the stem, petiolate, very broad and obovate; *petioles* winged on each side. *Corymbs* forked and paniced. *Peduncles* slender, pendulous from the weight of the flower, joined to the peltate calyx. *Calyx* 4-cleft, segments broadly ovate, scarcely acute, 5-nerved, spreading, or a little reflexed when in flower. *Corolla* 2-lipped; *upper lip* very small, hairy, rounded at the back, tapering up to a small round mouth, bearded in the throat with long white hairs, and marked downwards with reddish purple spots; *lower lip* very large, and inflated at the back; the lappet or cover that stops up the hole of the tube, is elegantly marked with purple lines. *Stamens* 2; *filaments* inserted in the base of the upper lip; short, thick, and fleshy, tapering to the point that is inserted into the base of the anthers: *anthers* two-lobed; *lobes* egg-shaped, white, oval, furrowed on the outside, and each bending downwards towards each other. *Ovarium* thickly clothed with hispid hairs, 2-valved, 2-celled.

This species of *Calceolaria* is a native of Chiloe, and differs from *C. crenatiflora*, by its large pendulous lower lip, and its 5-crenated crown, which in *C. crenatiflora* is suberect or

ascending, with the crown only 3-lobed. The present is by far the finest of the two.

Mr. Low has raised, I believe, but one plant of this species, which it is hoped will produce seeds. Its large flowers hanging down in a graceful manner, render it one of the most showy of the tribe.

Like the rest of its genus, this species will most likely succeed in a warm border, with a pot placed over it in severe weather. The plant was introduced by Mr. Anderson, the able Collector who was with Captain King in his voyage to Chiloe, and the Straits of Magellan.

For the explanation of the generic name, see folio 130, series 2.



1. The 4-lobed Calyx spread open, the lower one smallest, showing the Ovarium. 2. The upper lip of the Corolla spread open, to show the two lobes of each anther, which are peltate and egg-shaped. 3. Ovarium, terminated by a short Style, and very small capitate Stigma. 4. The outline of a root leaf.

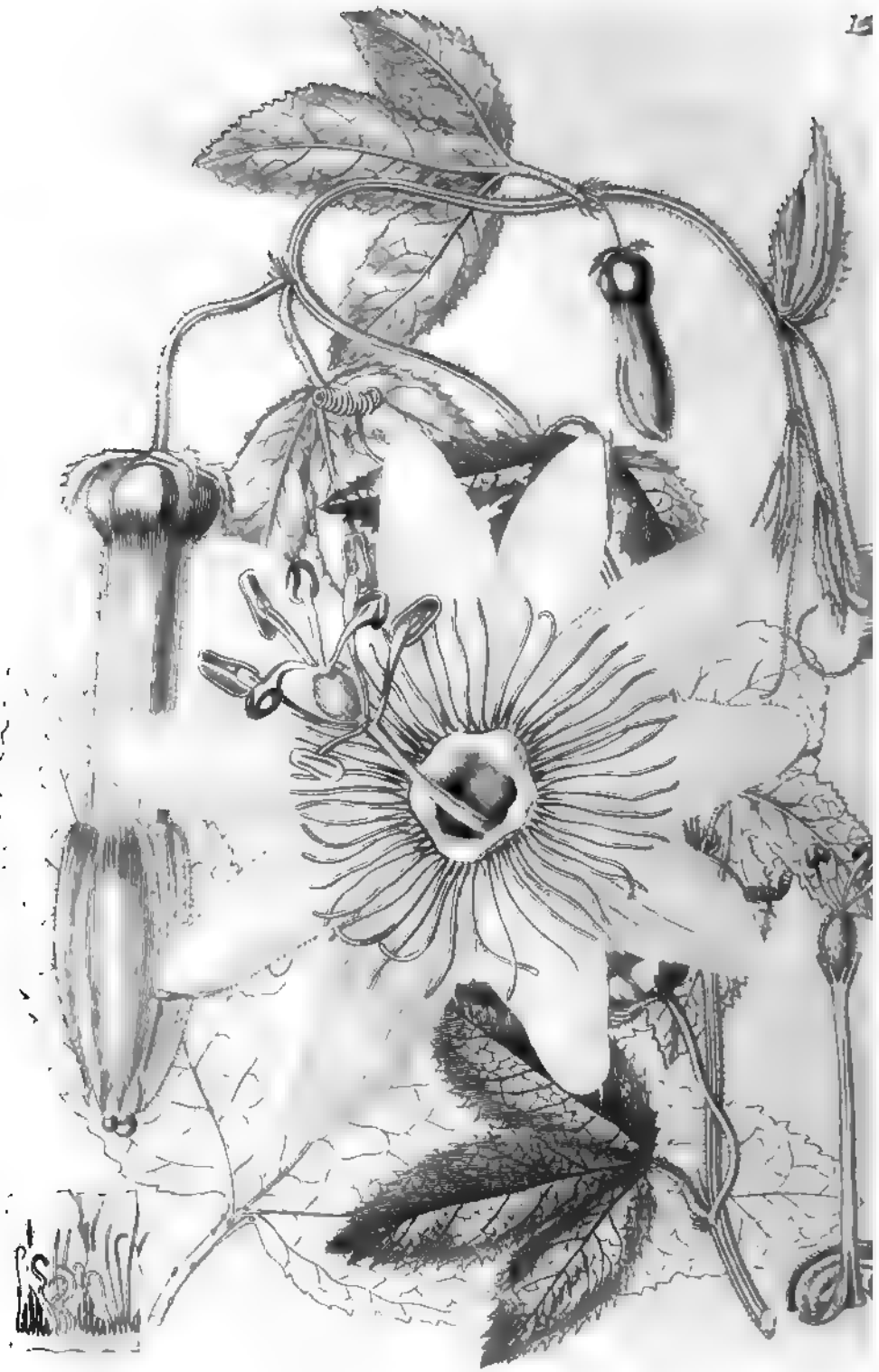


Note on Francoa Appendiculata, suprà folio 151.

Since the publication of my description of the above-mentioned plant, I have had my attention directed to the interesting memoir of M. Adrian de Jussieu, in the *Annales des Sciences Naturelles*, for January, of the present year. I see no reason, however, to alter my opinion with respect to the affinity of *Francoa* and *Galax*, which last, M. Adrian de Jussieu considers to belong to the *Ericææ*; but which, in my opinion, differs essentially from that family in several important particulars, especially in the structure of its capsule. As to the comparative length of the embryo in *Francoa* and *Galax*, I scarcely think much value can be attached to it, when the smallness of the seeds is taken into consideration. I beg to make the following additions to the description.

Stigmata subbiloba, e placentis 2 loculorum collateralium, nec singulorum, ortum ducentia, et subinde cum loculis capsulæ alternantia. *Ovula* processibus succulentis paululùm elevatis inserta, duplici ordine disposita, subhorizontalia, vix adscendentia. *Albumen* copiosum, cartilagineum. *Embryo* nec in basi, sed in apice albuminis locatus, ut rectiùs descripsit cl. Ad. de Jussieu. *D. Don Mss.*





1992, 1993, 1994, 1995

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Wink

TACSONIA pinnatistipula.*Pinnated Stipuled Tacsonia.**Class and Order.* MONADELPHIA PENTANDRIA.*Natural Order.* PASSIFLOREÆ. *DC. prodr. pars. 3. p. 321.**Tribus II. PASSIFLOREÆ VERÆ.* Petala nulla. Stamina (in unica 5.) Ovarium pedicellatum. Pedicelli sæpiùs nonnulli cirrhosi. Caules sæpiùs scandentes.*TACSONIA.* *Involucrum* triphyllum aut tripartitum. *Perianthium* coloratum: tubo longissimo cylindraceo: limbo decempartito, patente: laciniis quinque interioribus minoribus petaloideis. *Corona* duplex; altera: margo annuliformis, glandulosus, crenatus, summum tubum coronans; altera: membrana tenuis, integra, tubo supra basim adnata, columnam staminiferam cingens. *Stamina* 5, longissima, cum stipite ovarii connata, apice libera, divergentia. *Antheræ* versatiles. *Pistillum* et *Fructus* Passifloræ.—*Frutices scandentes cirrosi, facie* Passifloræ; *Pedunculis axillaribus, unifloris, solitariis aut geminis; Floribus longissimis, sæpiùs roseis, basi cinctis involucri calyciformi, e bracteis tribus connatis aut distinctis.* Kunth p. 439-440. *char. parùm mut.**Sect. I. EUTACSONIA.* *Involucrum* magnum, triphyllum, bracteis nunc liberis, nunc inter se coalitis.—* *Folius* trilobatis.*T. pinnatistipula*, ramis densè tomentosis tetragonis, foliis tripartitis subtùs tomentosis penninerviis suprà glabris nitidis parèe hirsutis: lobis elliptico-lanceolatis aut lanceolato-elongatis rugosiusculis mucronatis incurvo-serratis, petiolis 4-8-glandulosis, stipulis minimis pinnatis, cirris tomentosis, coronà filamentosà limbo dimidio subæquali.*Tacsonia pinnatistipula.* *Juss. ann. mus. 6. p. 393. DC. prodr. par. III. p. 334. Suct. hort. brit. ed. 2. p. 218.**Passiflora pinuatistipula.* *Cavan. icon. 5. p. 16. t. 428. Pers. syn. 2. p. 221. Spreng. syst. 3. p. 39.*

Stem extending to a great length: *branches* quadrangular, densely covered with wool, as are likewise the petioles or leaf-stalks, the stipules, the flower-stalks, and the bractes. *Leaves* on the old branches 5 inches in breadth, and 4 in length, varying to 3 inches in length, and $\frac{1}{4}$ of an inch in breadth, on the flowering stems, but seldom exceeding 2 and a half in breadth, smooth and glossy on the upper side; the under side clothed with dense wool, as has been already observed, but bearing a few straight hairs intermixed. The old leaves are very rugged and uneven, the younger ones much less so; but they have all more or less a sort of rugged appearance. *Leaf-stalks* or *petioles* on the flowering branches about three fourths of an inch in length, each bearing from 4 to 8 glands. *Stipules* small, deeply pinnatifid. *Tendrils* about 6 inches long. *Peduncles*,

or flower-stalks, about 3 inches in length, more or less twisting. *Bractes* 3, about a line below the tube of the flower, ovate, acute, sharply serrate, of a dark brown colour, rather more than half an inch in length. *Tube of the perianthium* 2 to 3 inches long, of a thick and fleshy texture, woolly without; white within, and much swollen at the base, and hollow on the inside, and from the top of which issues a white membrane, about 3 lines in breadth; this covers 5 holes, whence arise 5 swellings on the outside. *Limb* deeply parted into 10 segments, disposed in a double series: the *outer segments* pale green, somewhat coriaceous, tomentose, carinate, and furnished a little below the apex with an awl-shaped point: the *inner ones* thinner, rather shorter, pointless, and of a rose colour. *Filamentary processes* of a dark blue, spreading radiately, glossy, not half so long as the segments, some inserted in the front of the inner segments, and some between the two. *Torus* 3 inches in length, inserted in the base of the calyx. *Stamens* 5, monadelphous, or all joined together in a long cylindrical tube, attached to the torus, from its top to the bottom; from the top is produced 5 thin flattened incurved filaments; at the end of each of those is a minute very slender point, which is inserted in the anther above the middle of the back; they are then versatile. *Anthers* bursting longitudinally, and laying flatly open for the exclusion of the pollen. *Ovarium* egg-shaped, densely covered with short wool. *Styles* 3, 5 lines in length, attached to the back of the stigmas a little above the base, which causes them to bend downwards, so as to be nearer the pollen, smooth. *Stigmas* very large and fleshy, flatly rounded in front, 2-lobed at the apex at the back.

For the opportunity of giving a figure of this elegant Passion-flower, we are indebted to Mrs. Marryat, in whose choice collection, at Wimbledon, the plant has blossomed for two years successively. This year it has nearly filled the Conservatory. Its showy blossoms, which it produces in abundance, claim for it a place in every collection. It is a native of Talcahuano, and Valparaiso, in Chile; and we are inclined to think, that, in favourable situations, it will prove quite as hardy as the *Passiflora cœrulea*. The genus is principally distinguished by the long tube of the Perianthium. The name is of Peruvian origin, *Tacso*, being applied to several species of this genus in Peru, and was first employed by Jussieu, to denote this group.



1. Tube of the perianth split open, to show the hollow pits at the base. 2. Section of the limb, showing the disposition of the filamentary processes.





15. 4. 18. J. L. L. 1892

CLARKIA pulchella.

Pretty Clarkia.

Natural Order. ONAGRARIÆ. *DC. prodr. 3. p. 26.*

Tribus III. ONAGRÆ. Fructus capsularis, loculis polyspermis, seminibus non alatis. Calycis tubus ultra ovarium productus. Stamina petalorum numero dupla.—*Herbæ interdum basi suffruticulosa.*

CLARKIA. Calyx tubulosus, 4-fidus, omnino *Oenotheræ*. Petala 4-unguiculata. Stamina 8; alterna 4, castrata. Stigma 4-partitum: lobis subrotundis, petaloideis. Capsula 4-locularis.—*Herbæ annuæ pulcherrimæ. Folia alternis, integerrimis. Floribus axillaribus, sessilibus, solitariis, amari purpureis, v. albis.*

Clarkia pulchella. *Pursh flor. amer. sept. 1. p. 260. t. 11. Nutt. gen. amer. 1. p. 249. Lindl. bot. reg. 1100. DC. prodr. 3. p. 52.*
f. flore albo.

Annual, erect, from a foot to eighteen inches in height, branching. *Stem* round, or a little flattened in the young branches, thickly clothed with short pubescence. *Leaves* alternate, nearly sessile, tapering to both ends, entire, clothed on both sides with short pubescence: lower ones lanceolate; upper ones linear. *Petioles* very short, pubescent. *Flowers* axillary, solitary, nearly sessile, varying from a light lilac, to a bright reddish purple. *Ovary* below the calyx, seated on a short peduncle, slightly 8-furrowed, densely clothed with a hoary pubescence. *Calyx* similar to *Oenothera*, tubular, 4-cleft, pubescent, more or less tinged with purple, generally split on one side for the expansion of the corolla: segments lanceolate or linear, more or less connected. *Petals* 4, crossing each other, deeply 3-lobed, with a long slender unguis, which is toothed on each side: lobes divaricately spreading; the terminal one obovate, oblong, obtuse, crenulate at the point: side ones ligulate, also crenulate. *Stamens* 8, four fertile and four sterile, the fertile ones alternate with the petals, the sterile ones opposite to them, and scarcely half the length of the fertile ones: *filaments* smooth, purple:

anthers linear, two-celled: *pollen* white. *Style* filiform, erect, smooth, shorter than the petals. *Stigma* 4-parted, the segments spreading, flat, and rounded, white.

Undoubtedly one of the most showy among the many interesting additions made to our list of hardy annuals by Mr. David Douglas, in the course of his travels in the north-west regions of America; and, according to whom, the plant is met with abundantly in the countries near the Columbia. It was first discovered on the banks of the Kooskoosky and Clarke Rivers, by Captains Lewis and Clarke, well-known by their travels across the North-American Continent to the Pacific Ocean; and after the last mentioned of those Gentlemen the genus was named by Pursh, who has given a tolerable figure and description of it in his *Flora* of North America. Mr. Douglas has added two others to the genus, but both of them inferior to the present in beauty. The circumstance of the four alternate stamens being sterile, distinguishes the genus from *Oenothera*, with which, in other respects, it agrees. The stigma varies much in form in different species of *Oenothera*. The plant is quite hardy, succeeds well in almost any soil, and produces its seeds in great abundance. The flowers are found of various shades of purple in the cultivated plant; but the white variety, represented in our plate, is more particularly deserving of notice.

Our drawing was taken at the Nursery of Messrs. Allan and Rogers, at Battersea.



1. Calyx. 2. Stamens, with part of the petals. 3. Pistil.





ROSA indica var. *Smithii*.

Smith's Yellow Noisette Rose.

Linnean Class and Order. ICOSANDRIA POLYGYNIA.

Natural Order. ROSACEÆ. *Juss. gen.* p. 334.

ROSA. Calycis 5-fidi, tubo urceolato, carnosio. Petala 5. Stamina multiplici ordine copiosissima. Ovaria indefinita, parietibus tubi calycini undique inserta. Stylis totidem, exserti, unilaterales. Achenia extrueta, crustacea.

Frutices (hemisph. boreal. regionibus temperatis propria!) plerumque erecti. Folia raro simplicia. Flores speciosi, delectatissimi. D. Don Mus.

1. *R. indica*, foliolis ellipticis acuminatis glabris crenato-serratis subtus glaucis, ovaria 40-50. *Lindl. Monog.* p. 106.
Rosa indica. *Linn. sp. pl.* p. 705. *Lawr. ros. t.* 26. *Willd. sp. pl.* 2. p. 1079. *Ait. hort. kew. ed. 2.* p. 266. *Redout. ros. 1. t.* 14. et 2. t. 15. *DC. prodr.* 2. p. 600.
 Var. *Smithii*, floribus copiosis corymbosis plenius pallide sulphureis fragrantissimis.

An upright, much branched shrub, from four to six feet high, sparingly armed with scattered, compressed, hooked prickles. *Branches* smooth, tinged with purple. *Leaves* composed of from five to seven, and the upper ones rarely of more than three leaflets, which are ovate, pointed, rather coriaceous, rounded at the base, regularly serrated, with short, incurved, somewhat adpressed, pointed, equal teeth, slightly revolute at the margin; smooth on both surfaces; the *upper* of rather a deep green; the *under* paler; slightly glaucous, and beautifully veined. *Foot-stalks* and *rachis* narrow, channelled, sparingly glandular, otherwise quite smooth, and occasionally furnished with a few hooked prickles. *Stipules* narrow, pointed, and fringed with glands. *Flowers* about the size of the double-yellow China Rose, but of a deeper yellow, and like the Noisette Rose, in clustered corymbs of from ten to twenty-two, and highly fragrant. *Calyx* tube tribinate, glandular: *segments* broadly ovate, with a long,

attenuated, toothed point, glandular, particularly at the edges, the inner surface downy, mostly simple, but occasionally furnished with one or two pair of pinnæ.

A hybrid production, from the Noisette Rose, fertilized by the pollen of the yellow China Rose, raised by Mr. W. Smith, of Coombe Wood, to whom we are indebted for the specimen whence our drawing was taken. It resembles the former in many respects, but is of much more vigorous growth, and the flowers much more copious, of a deeper yellow, and disposed, like the Noisette Rose, in corymbs. They are highly fragrant. This Rose is perfectly hardy, is readily increased by cuttings, and may be regarded as a most valuable addition to our already numerous list of China Roses.

The rose is the emblem of youth and beauty; in Latin, *Rosa*; in Greek, ῥόδον; and in Celtic, rhodd, or rhudd, all signifying red, or referring to the prevailing colour in this genus.





17 Hort. 64

Ed. by J. R. Gregory, Apr. 1881

ALSTRÆMERIA hæmantha.*Crimson Alstræmeria.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* AMARYLLIDÆÆ. *Brown prodr. novæ-poll. p. 296.**Sect. IV.* ALSTRÆMERIÆ.*ALSTRÆMERIA. Suprà fol. 15.*

A. hæmantha, caule erecto, foliis lineari-lanceolatis glabris tortuosis margine ciliatis, pedunculis ramosis umbellatis, perianthii foliolis 3 exterioribus ovato-lanceolatis serratis.

Alstræmeria hæmantha. Ruiz. et Pavon fl. peruv. et chil. 3. p. 60. Schult. syst. veg. 7. p. 738.

Root composed of many cylindrical, white, fleshy tubers, about the thickness of one's finger, but attenuated towards their insertion. *Stems* erect, from two to three feet high, cylindrical, smooth, and glaucous, scarcely so thick as a goose quill. *Leaves* scattered, pointed, glaucous, and smooth on both surfaces, fringed at the margin with slender cartilageneous teeth; they are twisted at the base, which gives them an oblique, horizontal direction, and are about three inches long, with from four to ten lines in breadth; the *lower ones* are lanceolate; and the *upper ones* linear, or linear lanceolate. *Flowers* of a deep orange-red, about the size of those of *A. Simsii*, and, like them, umbellate. *Peduncles* from two to three inches long, filiform, smooth, purplish, mostly branched with two or three flowers, rarely simple, surrounded at the base by a whorl of leaves, and each branch having a single linear, pointed, fringed, leafy bractea at its insertion. *Perianthium* composed of six leaves, over-lapping each other, and contracted into a short tube at the base; three *outer ones* broader, ovate, lanceolate, somewhat spathulate, serrated along the edges of the lamina, spreading, and somewhat recurved, of a uniform deep orange-red, with greenish thickened points; three *inner*

ones lanceolate, pointed, entire; the two upper ones narrower, erect, marked with yellow and dark purple stripes; the lower one variegated with crimson, broader, and spreading. *Stamens* 6; the three *outer ones* rather longer: *filaments* slender, awl-shaped, smooth: *anthers* oblong, two-celled, bursting lengthways; those of the outer stamens fade before the three others are ripe. *Ovarium* somewhat spherical, with six prominent angles. *Style* slender, angular, smooth, about the length of the stamens. *Stigma* trifid, with narrow, blunt, papillary, recurved lobes.

Introduced by seeds from Chile, by Lady Oakes, in whose interesting collection, at Mitcham, the plant flowered, for the first time, in July last. It is clearly the *A. hæmantha* of Ruiz and Pavon, who remark, that the species varies much in colour, which induces us to believe, that they have, and, perhaps, justly, included in it the *A. Flos Martini, rosea*, and *tricolor*, with some others of similar habit, and equally difficult of definition. It is very nearly related to *A. Simsii*, given at TAB. 267, of the first series of this work, and is principally distinguished from it by the three outer leaves of the perianthium being serrated, which in that species are nearly, if not quite entire. Found by Ruiz and Pavon, on hills, and in waste grounds, in the Province of Rere, Chile, flowering in December and January.

We are obliged to Lady Oakes for the opportunity of giving a figure and description of this elegant, and, hitherto, little known plant, which appears to require the same treatment as *A. Simsii*. *D. Don Mss.*



1. Three inner Stamens. 2. Three outer ones. 3. Pistil.



L. complanata

Pub by J. Ridgway Sep 1832.

ADENÓPHORA verticillata.

Whorl-leaved Adenophora.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. Brown prodr. fl. novæ-holl. p. 559.

ADENOPHORA. Suprà fol. 108.

A. verticillata, foliis radicalibus petiolatis subrotundo-ovatis serratis; caulinis subsessilibus lanceolatis verticillatis, dentibus calycinis linearibus acutis, stylo corollæ subtubulosâ duplò longiori.

Adenophora verticillata. Fisch. adumb. gen. Aden. p. 5. Alph. De Cand. Monog. Camp. p. 356.

Campanula verticillata. Pall. reis. 3. p. 719. t. G. f. L. (bona) ed. gall. 4. p. 376. t. 34. Linn. fr. Suppl. p. 141. Lam. dict. 1. p. 582. Roem. et Schult. syst. 5. p. 116.

Campanula tetraphylla. Thunb. fl. jap. p. 87. (ex Alph. De Cand.)

Root perennial, thick, and fibrous. *Stems* from two to three feet high, perfectly straight, and simple, cylindrical, smooth, and hollow, scarcely exceeding the thickness of a crow-quill. *Leaves* smooth and shining, rather pale below; *radical ones* rounded-ovate, sharply serrated, flabellately nerved, on long slender footstalks; those of the stem nearly sessile, mostly in whorls of from three to six together, sometimes, especially towards the top of the stem, scattered, lanceolate, acute, serrated from the middle upwards with rather distant teeth, narrow, and attenuated towards the base, of from two to three inches long. *Flowers* drooping, disposed in a terminal racemose panicle, frequently arranged in whorls, as the leaves. *Teeth of the calyx* linear, or linear-lanceolate, pointed, slightly scabrous, and entire, about half the length of the corolla, which is comparatively small, rather tubular than campanulate, of a pale blue, with shallow pointed lobes. *Filaments* elastic, narrow, linear and smooth in their upper half, becoming broad, membranous, connivent, and bearded towards the base. *Anthers* pale yellow,

about half the length of the filaments, composed of two narrow parallel cells, which open lengthways. *Style* twice as long as the corolla, attenuated, and very slender towards the base, where it is inserted into the centre of the elevated, pentagonal, glandular, orange disk; thickened, and somewhat clavate upwards. *Stigma* composed of three oblong, blunt revolute lobes, which, together with the upper half of the style, are clothed with minute, glandular papillæ. *Capsule* somewhat globular, with prominent ribs, composed of three cells, with three lamellar placentæ, alternating with the dissepiments, and opening at the base by three holes. *Seeds* flat, oblong, slightly concave on one side, of an orange colour, with a pale yellow prominent raphe.

A singular and rare species, native of meadows, on the banks of the River Dovolgin, and near the village of Argun, in Eastern Tartary. It was first noticed by Messerschmid, and a description and figure of it is given by Pallas, in the Appendix to his travels. The plant has been but recently introduced by Mr. Anderson, of the Chelsea Botanical Garden, from seeds communicated by Dr. Fischer; it flowered, for the first time, in July last, in the abovementioned garden, where our drawing was taken.

The flowers, in the cultivated specimen, are larger, and less often disposed in whorls than in the wild one.

The very natural group to which this species belongs, was first separated from *Campanula* by Dr. Fischer, and the genus has been adopted by M. Alphonse De Candolle, in his valuable Monograph of this family; but notwithstanding these authorities, the propriety of considering it as a separate genus may well be questioned, since it is only distinguished from *Campanula* by the elevated glandular disk into which the style is inserted.

The plant succeeds well in the open border, in a soil composed of sandy peat and loam, and is readily increased by seeds, or by parting the root. *D. Don Mss.*

The generic name will be found explained at fol. 108, of the present series.



1. Calyx. 2. Corolla laid open. 3. Stamens. 4. Pistil.





R. L. H. Bailey 1872

CYPRIPEDIUM humile.

Two-leaved Ladies-Slipper.

Natural Order. ORCHIDÆÆ. *Brown prodr.* 309.

CYPRIPEDIUM. *Suprà fol.* 3.

Sect. VI. *DIANDRÆ.* *Stamina* 2 *antherifera.*

C. humile, foliis radicalibus geminis oblongo-ovatis obtusis, scapo aphylo unifloro, lobo columnæ rhomboideo acuminato deflexo, labello perianthii laciniis longiore antice fissio.

Cypripedium humile. *Willden. sp. pl.* 4. p. 144. *Hort. Kew. ed.* 2. v. 5. p. 221. *Salisb. Linn. trans.* 1. t. 3. f. 4. *Pursh fl. amer. sept.* 2. p. 595. *Spreng. syst.* 3. p. 746.

Cypripedium acaule. *Hort. Kew.* 3. p. 161. *Botan. magaz.* 192.

Root perennial, consisting of a tufted bunch of fleshy fibres. *Leaves* rarely more than two, oblongly ovate, obtuse, glossy, but clothed on both sides with soft villous short hairs, strongly ribbed underneath, plaited, and channelled above. *Scape* erect, from a span to nine inches high, one-flowered, thickly clothed with short villous hairs. *Bractea* lanceolate, acute, keeled on the back, thickly clothed with short hairs, that are tipped with small glands. *Ovarium* short, angular, densely clothed with glandular hairs. *Leaves of the perianthium* ovate, the upper and lower ones ovate-lanceolate, clothed with short glandular hairs, strongly nerved; side ones narrower, taper-pointed, unequal sided, and bearded near the base. *Label-lum* large, purplish, longer than the leaves of the perianthium, split longitudinally on the upper side, strongly and numerously nerved, rugose, densely bearded inside, the hairs near the base purple. *Column lobe* rhomboid, acuminate: side lobes short, spreading, each producing an anther. *Stigma* large, fleshy, spatulate, slightly fimbriate, and clothed with short glandular hairs.

Native of North America, on dry mountains, bogs, and in shady situations. Introduced to our gardens in 1786, but

the species is still far from common. It generally forms part of the American border, requiring a peat soil; and is increased by parting the roots, which, however, should be done but seldom; for unless the plant is strong it rarely blossoms.

Our drawing was taken at Mr. Dennis's Nursery, Chelsea.

For the explanation of the generic name, see fol. 1 of the present series.







Bobby J. Rodgway Dec/1932

- 7, with fls

CALCEOLARIA Martineauæ.

Miss Martineau's Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr. v. 1. p. 433.*

CALCEOLARIA. Supra fol. 130. series 2.

Sect. II. STAMINA (2.) ANTHERIFERA.

- C** - *Martineauæ*, cæspitosa, herbacea; foliis petiolatis ovatis obtusiusculis dentato-serratis penninerviis supra mollissimo-tomentosis subtus hirsutis, corymbis 2-8-floris, labio superiore oblongo concavo; inferiore apice ruguloso-crenulado appendiculato intus sanguineo-variegato.
- C**alceolaria Martineauæ. *Low's Mus.*

Plant much tufted at the base, producing many shoots, which are covered with glandular hairs. *Leaves* all petiolate, ovate, a little obtuse, attenuated at the base, regularly feather-nerved; upper side very soft to the touch, like velvet, the feather-nerves being deeply channelled; under side clothed with long hairs, and small scale-like bristles, serrately toothed. *Petioles* rather long, flat on the upper side, and convex below, hairy on both sides. *Flower-stems* leafy, rarely above a foot in height, forked, tinged with purple to the first joint. *Peduncles* upright, or a little drooping, covered with numerous very unequal glittering hairs, as is also the whole of the flower-stem. *Flowers* by two's, or three's; lower ones in pairs, terminal ones in threes. *Calyx* peltate, deeply 4-cleft; segments broadly ovate, bluntish, concave on the inside in the bud state, spreading, densely covered with hairs, and fringed; upper one much recurved on both sides, inclining to revolute; the next 2 recurved a little on the outside, lower one quite flat. *Corolla* 2-lipped; upper lip rounded, almost pointed, curved inwards, or somewhat revolute, clothed with yellow hairs: lower lip scarcely inflated, rather narrow upwards, but widening abruptly to a broad end, which is undulate, and slightly crenate, with a

thickened margin passing down on each side from the top, and joined to the lappet, which does not quite cover the hole inside; from beneath the lappet is produced a most singular and curious appendage, when cut through, of a thick and fleshy substance, which is bent inwards at the end, distinctly crenulate, connected to the lower lip, which is altogether below it; the inside of the corolla is marked with lines and patches of various forms and shapes, which appear like inscribed characters of a red purple colour. *Stamens* 2, inserted in both sides of the upper lip, thick, and fleshy, tapering to the point, and inserted between the lobes of the anthers: *lobes* egg-like, white, roundly oval, furrowed on the outside, and bending downwards towards each other.

This elegant plant is the offspring of *Calceolaria Fothergilla*, fertilized by *Corymbosa*, and was raised by Mr. Blair, Gardener to John Martineau, Esq. at Stamford Hill. It has been named in compliment to Miss Martineau, a young Lady of great botanical taste.

Our drawing was taken at Mr. Low's Nursery, Upper Clapton. The plant flowers freely in the open border, from April to August, requires a light rich earth, and is increased by parting the roots.



1. Calyx. 2. Base of the Corolla, with the Stamens. 3. Style.





1813 by J. Rudgway o. 1851

2. 1851

CLAYTONIA virginica.

Virginian Claytonia.

Natural Order. PORTULACÆ. DC. prodr. 3. p. 351.

CLAYTONIA. Calyx disepalus, persistens; sepalis ovatis, oppositis. Petala 5, obcordata aut obovata (raro elliptica) hypogyna æqualia unguiculata, unguibus basi subconnatis. Stamina 5 ad ungues petalorum inserta. Ovarium sessile. Stylus 1 trifidus, ramulis intus stigmatosis. Capsula 1-locularis, 3-valvis, 3-sperma. Fila conductoria 3 antè fecundationem à placenta centrali ad styli basin directa. Semina sessilia. — Herbar glabræ, subsucculentæ, sæpius perennes. Folia integerrima, radicalia petiolata, summa sæpius opposita, sessilia, interdum connata. Racemi terminales. Flores albi aut rosei. DC, prodr. 3. p. 360.

C. virginica, foliis elongato-linearibus utrinque acutis uninerviis summis semilibus, racemi pedicellis solitariis ebracteatis, sepalis ovatis obtusis, petalis obovatis retusis.

Claytonia virginica. Linn. spec. 294. Pursh. fl. amer. sept. 1. p. 175. Spreng. syst. 1. p. 791. Pluk. phyt. 272. t. 102. f. 3.

Root tuberous, very large, producing numerous leaves and scapes. Leaves rather succulent, long and narrow, elongated, linear-lanceolate, acute, tapering to both ends, one-nerved, smooth and glossy, of a dark green above, paler beneath: lower ones attenuated down the long slender foot-stalk; those of the stem opposite, sessile, channelled. Scapes radical, smooth and glossy, each bearing two leaves, and a many-flowered raceme, the lower part faintly stained with red. Racemes drooping, and involute before the expansion of the flowers, afterwards becoming erect. Flowers white, alternate. Pedicles smooth and glossy, one-flowered, erect when the flower is expanded, afterwards recurved. Calyx of two sepals; the sepals broadly ovate, concave inwards, striate on the back, bluntly rounded at the points; the margins membranaceous. Petals 5, twice the length of the calyx, obovate, with a small notch at the end, and slightly crenulate, veined, the veins at first faint, and scarcely perceptible, but

afterwards becoming more distinct, and stained with red. *Stamens* 5, inserted in the claws of the petals: *filaments* smooth and glossy, attached to the back of the anthers: *anthers* flesh-coloured or pale red, two-lobed, slightly sagittate at the base. *Ovarium* smooth. *Style* smooth, trifid, the segments spreading, and terminated by blunt Stigmas.

An elegant little herbaceous perennial, native of North America, in moist woods. It requires a peat soil, and is readily increased both by parting the roots, and by seeds.

Our drawing was taken at the Botanical Garden, Chelsea.

The genus was named by Linnæus, after Dr. John Clayton, who collected the materials of the *Flora Virginica*, published by Gronovius, in which work the present species is described.



1. Calyx. 2. Petal, with a Stamen. 3. Style.





Ed. Smith del.

Abbey, Botany Dec 1831.

CORBULARIA serótina.

Late flowering Hoop-petticoat.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Div. I. Radix bulbosa. Flores spathecei, umbellati, raro solitarii.

Sect. V. NARCISSINÆ. Supra folio 146, series II.

CORBULARIA. Perianthium tubulosum; segmentis angustis, exiguis, patentibus, aut suberectis, coronâ truncatâ plerumque brevioribus. *Stamina* 6: filamentis perianthii basi insertis declinatis apice adscendentibus; *antheræ* incumbentes, versatiles, curvatae. *Ovarium* subturbinatum cylindricum, triloculare, trivalve. *Ovula* numerosa, quadrifariam inserta. *Bulba* parva. *Folia* angusta, semicylindrica, supra planiuscula. *Scapi* plerumque uniflori raro biflori.

C. serotina, foliis semicylindricis elongatis atroviridibus contortis semistriatis supra planiusculis, coronâ turgidâ truncatâ integerrimâ rugulosâ, stylo filamentorum longitudine incluso.

Corbularia serotina. *Haworth Monog. Narcis. in Scot. Brit. flor. gar. n. 25. ser. 2. p. 1. edit. 2. p. 1.*

Narcissus turgidus. *Salisb. prod. stirp. hort. Chap. Allert. p. 222.*

Narcissus Bulbocodium. *Botan. magaz. t. 88. non Linnaei.* (testante ejusdam herbario.)

Pseud. Narc. serotinus. *Park. par. p. 106. tab. 107. f. 8.*

Bulb small, rounded at the bottom, and tapering towards the leaves, somewhat like an onion, shell covering of the bulb, very thin, of a pale brown, sometimes decaying, and leaving the bulb naked altogether when in flower. *Roots or fibres*, some fleshy and succulent, others filiform and longer, some producing other fibres of a very small size. *Leaves* 2, 3, or 4 from each bulb, tapering to a long slender point; some on our plants, from the root to the point, a foot and a half in length, bent and twisted in various directions, of a very dark green, semicylindrical, and striated at the back, and flat on the upper surface, and slightly channelled. *Scapes* in our plant six inches from the bulb to the spathe, slightly flattened. *Spathe* membranaceous, tubular at the base, that incloses the peduncle, the upper part split, and tapering to an acute point, but not reaching to the end of the tube.

Peduncle half an inch in length: *tube* narrow at the base inflated gradually upwards: *segments* six, narrow, about an inch in length, tapering to a point, green down the middle that extends to the base of the tube; the edges yellow, and the middle also extends nearly to the base, and gives an appearance of being furrowed when growing, from the shadow of the yellow on the green. *Crown* about three-fourths of an inch in length of a bright yellow, gradually spreading, and becoming more so to the top, where its extent across is about an inch, sometimes extending to three lines more, marked up the centre with several deepish channels, which makes it rather uneven at the top, and ridged inside: top entire, not lobed, ornate: *tube* and *crown* an inch and half in length. *Stamens* inserted in the base of the perianthium, declining the points curved upwards, and recurved a little inward. *anthers* incumbent, versatile, or easily moved, curved. *ovarium* somewhat turbinate, cylindrical, 3-celled, 3-valved. *ovula* numerous, disposed in four rows, seated on two in each valve. *Style* about the length of the stamens, first declining, but ascending at the end. *Stigma* capitate.

The *Corbularias* being natives of the South of Europe chiefly, require a very slight protection in severe Winters; they thrive best in a light loamy soil, and a sheltered position; but also succeed well in pots, if treated as bulbous frame plants. The present species, if occasionally transplanted when the bulbs are quiescent, succeeds, also in the open ground.



1. Stamens. Style 2. .

Fig. 1



1 - 10

2 - 20 1/2 - 30

1860

ÍRIS Amœna.

Lovely Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

IRIS. Suprà fol. 11, et 58. Series 2.

I. *amœna*, barbata; scapo ramoso folia rectiuscula subæquante, spathis foliaceis, supremâ biflorâ, petalis inferne conniventibus. *Ram. et Schult. syst. veg.* 1. p. 486. *Redouté Liliac.* 6. t. 336.

Root composed of oblong, yellow, branched tubers. *Scape* cylindrical, branched, many-flowered, smooth, solid, occasionally furnished with one or two leaves, a foot, or a foot and a half high. *Leaves* broadly ensiform, erect, about half the length of the scape, of a pale glaucous hue, strongly ribbed. *Spathes* leafy, green, ovate, acuminate, hollow, and folded round the tube of the perianthium, which they rarely exceed in length. *Perianthium*, with the tube, cylindrical; the 3 outer segments cuneiform, entire, of a rich violet purple, beautifully veined downwards, with a white ground, the edges and apex recurved, strongly bearded with yellow hairs; inner ones spathulate, connivent, waved and entire, white, with narrow claws, which are marked with purple lines. *Filaments* subulate, white. *Anthers* pale yellow. *Stigmas* erect, cloven, pointed, and serrated at the apex.

Long cultivated in the Dutch gardens, whence it has been imported into our own. Its native country is unknown. Our drawing was derived from the collection of Robert Mangles, Esq. at Sunning Hill, Berks: it is an elegant

plant, and is well worth cultivating, thriving best in a rich loamy soil, and is readily increased by parting the roots.



1. An outer segment of the perianthium.
2. Stamens, and a portion of the Stigmas.





D. barbatus

S. J. G. B. 1872

R. H. B.

DIANTHUS aggregatus.*Crowded Pink.***Linnean Class and Order.** DECANDRIA DIGYNIA.**Natural Order.** CARYOPHYLLÆ. *Juss. gen. p. 299.***Tribus 1.** SILENÆ. Sepala coalita in tubum cylindraceum apice 4-5-dentatum. *DC. prodr. 1. p. 351.***DIANTHUS.** Suprà fol. 23. Series 2.**Sect L.** ARMERIASTRUM. Flores capitati vel corymbosi, sessiles vel pedunculati.§. 3. *Bracteis ovatis vel lanceolatis, calycibus vix striatis glabris.***D. aggregatus,** floribus aggregatis sessilibus, squamis calycinis ovatis longè cuspidatis membranaceis tubo longioribus, foliis lanceolatis ciliato-scabris nervosis, caule asperiusculo.**Dianthus aggregatus.** *Poir. supp. 1. p. 124. DC. prodr. 1. p. 356. Swt. hort. brit. ed. 2. p. 49.*

Perennial. Stems upright, branched, somewhat woody at the base, slightly angular and scabrous, strongly knotted at the joints. *Branches* terminated by one or more fascicles of flowers. *Leaves* opposite, lanceolate, acute, faintly 5-nerved, attenuated towards the base, where they are connate; margins rough, with short rigid glandular hairs; smooth on both sides, and of a dark green colour; those of the leaf-shoots broader and oblong; of the flower-stems lanceolate, and sharper at the point; the uppermost almost serrulate at the edges. *Flower-stems* bluntly angular, the branches terminated by a simple or 2 or 3 forked close head of flowers. *Flowers* many, aggregate, sessile, or nearly so, with numerous bractes, which are linear, taper-pointed, membranous towards the base, and fringed. *Scales* at the base of the calyx, four, broad at the base and membranaceous, tapering to a long subulate point, a little longer than the tube of the calyx and slightly fringed. *Calyx* tubular, smooth, somewhat rugose, marked, 5-toothed: *teeth* straight, ovate, tapering to a slender point. *Petals* 5, spreading flat, very broad and

rounded, toothed with many sharp teeth, tapering downwards to a long slender claw; the limb of a bright crimson, when first expanded, afterwards changing to a dark purple, and marked towards the base with a darker irregular patch, bearded with a few long scattered hairs; the underside of a paler colour. *Stamens* 10, inserted in the receptacle, surrounding the ovarium. *Filaments* smooth, slender, connected at the base. *Anthers* purple. *Ovarium* pedicellate, smooth. *Stigmas* spreading, densely pubescent on the inner side, the points somewhat bent and twisted.

The native country of this plant is unknown, and hence we are inclined to think it probably originated in some garden. It is closely related to *Dianthus barbatus*, of which species it may be, perhaps, only a variety; but it is a highly ornamental plant, and, therefore, deserving of a place in every flower garden. The plant is perennial, delighting in a light soil, and is increased by cuttings or by seeds, which it perfects in abundance. We are indebted to Mrs. Marryat for the opportunity of figuring it.

For the explanation of the generic name, see folio 23.



1. Calyx. 2. Petal. 3. Stamens. 4. Pistil.



Thunberg

Tab. 27. *Hydrocotyle* 1822

Tab. 27

MALESHÉRBIA coronata.

Crowned Malesherbia.

Linnean Class and Order. MONADELPHIA PENTANDRIA.

Natural Order. MALESHERBIACEÆ. *D. Don in Edinb. Phil.*

Journ. Jan, 1827. p. 321.

MALESHERBIA. *Perianthium* monophyllum, tubulosum, membranaceum, coloratum, 10-fidum: *segmentis* æstivatione imbricatis; *interioribus* 5 petaloideis coronâ: *faux* coronâ continuâ brevissimâ membranaceâ v. dentatâ v. 10-lobâ persistenti ornata. Stamina 5, hypogyna, apici columnæ inserta. *Antheræ* incumbentes, biloculares, longitudinaliter dehiscentes. *Ovarium* apici columnæ adnatum, 1-loculare: *ovulis* erectis, biseriatim indefinitis, funiculo umbilicali stipitatis. *Styli* 3, capillares, persistentes, valvis capsulæ alternantes, et inter ipsarum bases inserti. *Stigmata* simplicia, clavata, disco concavo pruinoso. *Capsula* 1-locularis, polysperma, valvis 3 apice dehiscens. *Placentæ*: *costæ* 3, prominentes, funiculis persistentibus seminiferis stipatæ, parieti capsulæ infra dehiscentiæ locum insertæ, axi valvarum perpendiculares. *Semina* obovata, striata, apice strophiolâ fungosâ laceratâ, basi umbilico tuberculiformi aucta: *testâ* *exteriore* crustaceâ, crassiusculâ; *interiore* cartilagineo-membranaceâ: *albumen* copiosum, carnosum. *Embryo* erectus, axilis: *cotyledones* orbiculatæ: *radicula* teres, recta, obtusissima, cotyledonibus longior, centrifuga.

Plantæ (Peruviæ et Chili apricis propriæ) *erectæ, ramosæ, pubescentes, caule sæpè infernè suffruticoso*. Folia *alterna, simplicia, exstipulata*. Flores *axillares v. terminales, solitarii, sessiles*.

** *Perianthio campanulato: fauce dilatatâ*. Chilenses.

M. coronata, glanduloso-pubescent; foliis linearibus sinuato-dentatis, perianthii fauce dilatatâ, coronâ simplici erosè dentatâ, ovario globoso. *D. Don in Edinb. Phil. Journ. Jan. 1832.*

Herba minutè pubescens, cinerea, glandulisque pedicellatis copiosè ornata. *Caulis* erectus, teres, sesqui v. tripedalis. *Folia* brevissimè petiolata, elongato-linearia, obtusa, basi attenuata, 3-5-pollicaria; *inferiora* grossè sinuato-dentata; *superiora* plerumque integerrima, densè glandulosa. *Flores* violacei, paniculati. *Perianthium* tomentosum, copiosè glandulosum, pollicare: *faux* dilatata, in tubum gradatim attenuata: *limbus* fauce longior; *laciniis exterioribus* elliptico-oblongis, obtusis, trinerviis, reticulato-venosissimis; *interioribus* ovatis, acutiusculis, basi angustatâ subunguiculatis, venosis, brevioribus: *coronâ* simplici, brevissimâ, tenuissimè membranaceâ, erosè dentatâ. *Filamenta* complanata, glabra, basi in columnam elongatam connata. *Ovarium* globosum, tomentosum, columnæ staminalis longioris apici insidens. *Styli* 3, terminales! longissimi, capillares. *Stigmata* paullò dilatata. *D. Don in loc. cit.*

We are indebted to our friend, Mr. Thomas Brown, of the Highgate Nursery, for the opportunity of publishing a figure of this remarkable plant, which we did not anticipate

the pleasure of having so soon to record as an inhabitant of our gardens. It belongs to a small but interesting family of plants peculiar to South America, and as far as we yet know, to Peru, and Chile; those of the former country being distinguished by a strictly tubular perianthium. Two species only have been recorded by former botanists; to those we have had the satisfaction of adding four more species, besides the one now under consideration, which we can scarcely believe to be the same with the *Gynopleura linearifolia*, of Cavanilles; the smallness of its flowers, the deeply parted crown, the elliptical ovarium, and the plant being clothed with shaggy hairs, appear sufficient to warrant us, in the absence of more direct evidence, in keeping them apart. The present, as well as our *M. humilis*, and some others, is annual, and was raised by Mr. Brown from seeds collected in Chile, by Mr. Hugh Cuming, from whose rich herbarium we had previously described the species. The plant flowered, for the first time, in September last; it requires a light sandy soil, and is increased by seeds.

The genus was dedicated to the memory of M. Lamoignon de Malesherbes, some time President of the Court of Aids, and Minister of State in the reign of Louis the Sixteenth, whose disinterested and zealous advocate he afterwards became before the National Convention. M. de Malesherbes was a distinguished philosopher, and an active promoter of botany and horticulture, in which sciences, as well as that of agriculture, he took great delight. He was unquestionably one of the most spotless and exemplary characters of his time; but nothing could save him from the vengeance of the accursed crew, which, under the banner of liberty, then deluged France with blood, being, at the age of seventy-three, dragged, together with his only daughter, to the scaffold; affording a fearful warning of the extremes to which popular assemblies may be led when once beyond the reach of the laws.

D. Don Mss.



1. Leaf. 2. Pistil,





CALCEOLARIA Atkinsiana.*Mr. Atkins's Slipperwort.***Linnean Class and Order.** DIANDRIA MONOGYNIA.**Natural Order.** SCROPHULARINÆ. *Brown prodr.* 1. p. 433.**CALCEOLARIA.** *Suprà fol.* 180. Series 2.

C. Atkinsiana, herbacea, lanuginosa; foliis radicalibus spathulatis erosè dentatis rugosis, floribus corymbosis, corollæ labio inferiori orbiculato saceato subcrenato fulvo-sanguineo discolori.

The plant is perennial and tufted, throwing out a succession of flowering stems, which are from eighteen inches to two feet in height, forked; the whole clothed with a cottony down, which is more abundant in the early state, or when the plant is young. *Leaves* much wrinkled, coarsely and unequally toothed at the margin; *radical ones* obovate, or rather spathulate, obtuse, with a short winged footstalk from 3 to 5 inches long, and from 2 to 3 broad; those of the stem are seldom more than one or two pair, smaller, ovate, pointed, almost entire, and nearly sessile. *Corymbs* forked, composed of from 10 to 30 flowers. *Peduncles* filiform, clothed with glandular pubescence. *Bractes* in pairs, ovate, entire. *Calyx* parted into 4 broadly ovate, acute segments, covered like the peduncles with a glandular down. *Corolla* bilabiate: *upper lip* small, concave, incurved, yellow: *lower one* large, orbicular, hollow, pouch-shaped, ventricose, of a very deep fulvous red, with a yellow border, and slightly crenate. *Stamens* 2. *Anthers* pale yellow, composed of 2 divaricately spreading lobes. *Ovarium* conical, downy, 2-celled. *Style* awl-shaped, slightly bent at the point.

This splendid hybrid *Calceolaria*, was raised between *C. corymbosa*, and *arachnoidea*, by Mr. James Atkins, Nurseryman, Northampton, to whom we are obliged for the plant whence our drawing was obtained. It is perennial, and

apparently quite hardy, as Mr. Atkins has had plants of it out all last Winter in the open border, without suffering injury from the cold ; and he found them to flower quite as well as those that had been under glass ; but he recommends their being defended from excessive wet by means of an hand-glass, raised so as to admit of a free circulation of air, the plant appearing to be both impatient of wet and confined air. Mr. Atkins finds that peat suits it best ; and he informs us that the original plant, which is placed in a border of that soil, is five feet in circumference, and has sent forth, in the course of the season, upwards of 150 stems, each bearing from 30 to 70 flowers, which is well attested by the samples Mr. Atkins has sent us. The plant is increased by parting only.



1. Calyx. 2. Corolla. 3. Pistil.

CORRECTIONS IN No. XL. AND XLI.

In the absence of the Editor from London, the Plates in the September Number having been incorrectly numbered, the following alterations become necessary, to correspond with the letter-press, viz.—

<i>For</i>	160,	<i>read</i>	157.
	157,		158.
	158,		159.
	159,		160.

In the text of Tab. 157, line 10, over leaf, for *Clarke*, read *Clark*.

Tab. 158, line 7, for *propria*, read *proprii*.

Tab. 160, line 15, over leaf, for *Dovolgin*, read *Dorolgin*.

No. XLI. Tab. 164, line 10, for *Bulba parva*, read *Bulbi parvi*.





FRANCOA sonchifolia.

Caulescens Francoa.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. GALACINÆ. D. Don, in Edinb. Phil. Journ. Dec. 1823, p. 53.

FRANCOA. Suprà fol. 161.

F. sonchifolia, caudice elongato, calycinis segmentis dilatatis, petalis marginè involutis, staminibus sterilibus subulatis, stigmatibus ellipticis integerrimis. D. Don Mus.

francoa sonchifolia. Cav. icon. 8. p. 76; in notâ. D. Don, in l. c. p. 52.

Panke sonchifolia. Willd. sp. pl. 2. p. 487.

Claupanke amplissimo Sonchi folio. Fowill, Peruv. et Chil. 2. p. 742. t. 31. (bona.)

Herba perennis caulescens, tripedalis. *Radix* fusiformis, fibris numerosis instructa. *Caudex* pedalis v. sesquipedalis, divisus, cylindraceus, foliosus, digiti minoris crassitie. *Folia* ferè Rapi, sessilia, basi latè decurrentia, ampla, lyrata, coriacea, spithamæa v. pedalia, utrinque pilis mollibus copiosè ornata, suprà demùm glabriuscula, nitida, gramineo-viridia; parùm rugoso-venosa, subtùs pallidiora, varicosa et copiosius pilosa, costâ mediâ crassissimâ, suprà planiusculâ, subtùs rotundâ: *lobis* rotundatis, cucullatis, basi dilatatis, auriculato-cordatis, margine subsinuatis, denticulatis (denticulis glandulâ callosâ nudâ coronatis;) *terminali* maximo, subrotundo-cordato, palmari v. spithamæo. *Pedunculi* terminales, cylindracei, copiosè pubescentes, subtomentosi, simplices v. divisi, pedales v. bipedales, superne attenuati, dum ad ramorum basin folio unico subsimplici lobato-dentato muniti. *Racemus* spicatus, terminalis, palmaris v. spithamæus. *Flores* copiosi, undique versî, pedicellati, bractæa lanceolato-lineari acuminatâ integerrimâ basi suffulti. *Pedicelli* teretes, tomentosi, bractæa triplò breviores. *Calyx* tomentosus, 4-partitus: *segmentis* ovato-lanceolatis, dilatatis, trinerviis, 5-plò majoribus quàm in *F. appendiculatâ*, tantùm acutis, nec acuminatis. *Petala* 4, erecta, cuneato-oblonga, obtusa, pinnatim nervosa, marginibus involutis concava, panicea, maculâ oblongâ intensiùs coloratâ disco ornata, extùs pubescentia, costâ validâ obtusè carinata, vix calyce duplò longiora: *marginibus* albidis. *Stamina* 16, perigyna; 8 *fertilia*, filamentis elongatis, subulatis, glabris, albis: *antheris* bilocularibus, longitudinaliter dehiscen- tibus, luteis; 8 *sterilia* subulata, acuta, pallidè flava, vix triplò breviora. *Ovarium* 4-gonum, 4-loculare: *ovulis* subfusiformibus, horizontalibus, parùm adscendentibus, triplici ordine insertis. *Stylus* brevissimus, obconicus. *Stigma* 4-lobum: *lobis* ellipticis, obtusis, integerrimis, conniventibus, carno- sis, post impregnationem patulis, margine paululùm revolutis, superficie prui- nosa, e placētis loculorum collateralium constitutis, hinc cum loculis al- terantibus. *Caprula* oblonga, tetragona, 4-locularis, calyce ferè duplò longior, vix uncialis: *loculis* polyspermis, apice prominentibus, foramine

dehiscentibus : *valvulis* crustaceo-membranaceis. *Placentæ* duplicatæ, margini interiori valvularum longitudinaliter adnatæ, lineari-angustissimæ, demùm solutæ. *Semina* subfusiformia, hinc convexa, inde planiuscula, processibus succulentibus brevissimis inserta, horizontaliter assurgentia. *D. Don Mss.*

Raised by Mr. Anderson, from seeds collected at Conception, in Chile, by an officer, attached to the expedition of our friend Captain King; and the plant whence our figure was derived, blossomed at the Chelsea Botanic Garden, in August last. It is perennial, and succeeds well in the open border, during the Summer months, but requires the protection of a frame, or hand-glass, in Winter; a light soil appears to suit it best, and it is readily increased by seeds. It is distinguished from *F. appendiculata*, already given at Tab. 151, of this Work, by several important marks. The caudex rises to a foot, or a foot and a half; the leaves are decurrent at their base; the segments of the calyx are broader, and less pointed than in the latter; the petals smaller, and incurved at the edges; and the stigmas elliptical, and perfectly entire.

Our former description of this species having been drawn up from rather slender materials, it is, therefore, gratifying to have an opportunity of giving a more complete illustration of a plant, which, although faithfully represented by the accurate Feuillée, has been involved in much obscurity. I take this opportunity, also, of giving the following corrected character of *Francoa ramosa*:—segmentis calycinis ovato-lanceolatis acutis læviusculis, staminibus sterilibus obtusis stigmatibus cuneatis bilobis, scapo ramoso.

The radical leaves in this last, which my former specimens wanted, are sessile, lyrate, and clothed on both sides with adpressed hairs. The stem, which is as much entitled to be regarded as a scape, as that of *F. appendiculata*, is much branched, and is either glabrous, or pilose; the flowers are pure white, and the segments of the calyx less distinctly nerved, than in the other species, and the point is more or less elongated. I have not referred to the description and figure by M. Adrien de Jussieu, in the “*Annales des Sciences Naturelles*,” because they evidently do not belong to the present species, but to *F. appendiculata*.

The generic name is already explained, under *F. appendiculata*. *D. Don Mss.*



1. Calyx. 2. Petals. 3. Stamens and Pistil. 4. Capsule.



E. L. Smith del

Pub by Polygraph. Soc. N.Y.

DRYPIS spinosa.*Prickly Drypis.**Natural Order.* CARYOPHYLLÆ. *DC. prodr.* 1. p. 351.Tribus I. *SILENÆ*. Sepala coalita in tubum cylindraceum apice 4-5-dentatum.*DRYPIS.* Calyx tubulosus 5-dentatus. Petala 5, unguiculata, fauce bidentatâ, limbo bipartito. Stamina 5. Styli 3. Capsula 1-locularis circumcissa abortu monosperma. *DC. prodr.* 2. p. 388.

Drypis spinosa. *Linn. spec.* 390. *Willden. sp.* 1. p. 1513. *Jacq. hort. vind.* 1. t. 49. *Lam. ill.* t. 214. *Pers. syn.* 1. p. 331. *Hort. Kew. ed.* 2. v. 2. p. 175. *Rœm. et Schult. syst.* 6. p. 680. *DC. prodr.* 1. p. 388. *Botan. magaz.* 2216. *Spreng. syst.* 1. p. 942. *G. Don, gen. syst. of gard. and bot.* 1. p. 418.

A thick, spreading, suffrutescent plant, much branched, and remaining several years: *branches* extending round to a considerable distance, 4-sided, smooth and glossy, ascending. *Leaves* opposite, linear-subulate, rigid, terminating in a sharp spine, remaining persistent on the old stems, but turning dry and brown. *Flowers* numerous, pale lilac, terminating the branches in a many times forked cyme. *Bractes* lanceolate, taper-pointed, broad at the base, with 2 or 3 long spiny teeth on each side. *Calyx* tubular, striated, 5-toothed, the teeth short, with membranaceous margins. *Petals* 5, with a long slender unguis: *limb* deeply 2-parted, and 2-toothed, or crowned at the base: *lobes* lanceolate, bluntish. *Stamens* 5, longer than the petals: *filaments* smooth and slender. *Ovarium* smooth. *Styles* 3, short, and slender. *Stigmas* simple.

A native of Italy, and Barbary. The plant has been generally regarded as a biennial, but there is no doubt of its being perennial; for the one whence our figure was taken, has stood, for upwards of ten years, on the rock-work, in the Botanical Garden, at Chelsea, where it still continues to

thrive. It appears to be admirably adapted for a rock-work, where it forms a suffrutescent bush, producing its flowers in great profusion, and for several months together. Cuttings, planted in sand, root readily.

The name alludes to the thorny leaves, being derived from *δρυντω*, to tear.



1. Flower. 2. Calyx. 3. Corolla, with the Stamens. 4. Pistil.





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Pub. by Ridgway Jan 1832

BÉRBERIS nervosa.*Nerved-leaved Barberry.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* BERBERIDÆ. *DC. syst. nat. v. 2. p. 1.**BERBERIS.* *Suprà fol. 100.**Sect. II. MAHONIA.* *Suprà fol. 94.*

B. nervosa, foliis 5-8-jugis cum impari: foliolis ovato-oblongis acuminatis sub-5-nerviis margine copiosè dentato-spinosis, petiolis elongatis basi squamatis, racemis elongatis erectis, filamentis apice bi-dentatis. *D. Don Mss.*

Berberis nervosa. *Pursh fl. amer. sept. 1. p. 219. t. 5. (folia tantùm). Hook. fl. amer. 1. p. 29.*

Mahonia glumacea. *DC. syst. nat. v. 2. p. 21. Prodr. v. 1. p. 109.*

Mahonia nervosa. *G. Don, gen. syst. of gard. and bot. 1. p. 118.*

Berberis glumacea. *Schult. syst. 7. p. 19. Spreng. syst. 2. p. 120. Swt. hort. brit. add. p. 584.*

Stem shrubby, scarcely 6 inches high, divided, round, smooth, and glossy. *Leaves* from a span, to a foot long, impari-pinnate. *Leaflets* from 5 to 8 pair, with an odd one, nearly sessile, oblong, dilated, and some nearly an inch and a half broad at the base, and from one and a half to two and a half inches long, generally oblique, tapering to a long slender point, and terminated by a long sharp spinous point; of a dark green colour, smooth and glossy on the upper side; the under side paler, furnished with 5 distinct nerves, which ramify throughout the leaf; margins furnished with from 7 to 9 sharp spiny teeth on each side. *Petioles* elongated, cylindrical, of a dark brown colour, smooth, and glossy, dilated at the base, with membranaceous edges, clasping the stem, the membrane terminating on each side in a sharp upright tooth. *Rachis* cylindrical, with knotty joints. *Scales* several, cartilaginous, persistent, lanceolate, tapering to a long slender point, rolled inwards at the edges, from an inch and a quarter, to an inch and a half in length, dark brown. *Racemes* several, from 3 to 5 inches long, surrounded at the base with the persistent scales. *Pedicles* crowded, sometimes scattered, or rarely verticillate, smooth, each springing from

the axil of a small persistent bracte, generally 1-flowered but, occasionally, 2-flowered, with a bracte at the base of the upper footstalk; *bractes* and *pedicles* variable in length, the lower bractes longest, lanceolate, acuminate; upper ones ovate, concave, and less acute, but generally terminated by a sharp point, sometimes longer, and other times shorter than the pedicles. *Calyx* of 6 sepals, pale straw colour, disposed in 2 series, the outer ones smallest, ovate, cucullate; inner ones larger, thinner, cucullate, rounded, more resembling petals, and larger than them; at the base of the outer sepals are 3 little sepaliform bractes, flatly pressed to the calyx. *Petals* 6, ovate, bluntly rounded, concave, of a bright yellow. *Stamens* 6: *filaments* bearing a tooth on each side at the point. *Ovarium* ovate, attenuated to the point, smooth. *Stigma* large, peltate, orbicular, pustulate.

A very dwarf evergreen shrub, native of the north-west coast of America; first discovered by Mr. Menzies, at the mouth of the Columbia; and, according to Mr. Douglas, common in shady pine forests, along the coast of the Pacific. The species is well distinguished from its other congeners, with pinnated leaves, by the leaflets being traversed from the base, upwards, by several nearly parallel nerves. Pursh having erroneously added the flowers of *B. aquifolium*, to his plate of *nervosa*, misled De Candolle, who has reproduced the species under the name of *glumacea*. The specimen, in proof of this, exists in the Lambertian Herbarium, with which Pursh's entire collection is incorporated.

The plant thrives best in a mixture of peat and loam, quite hardy, and is increased by slips. Our drawing is from Mrs. Marryat's collection, at Wimbledon.



1. Outer leaves of the Calyx. 2. Inner leaf of ditto. 3. Petal. 4. Stamen. 5. Pistil.



S. ...

... 1884

NIEREMBERGIA grácilis.

Slender Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANÆ. *Brown prodr. 1. p. 443.*

NIEREMBERGIA. *Calyx* tubulosus, 5-fidus: *lobis* ligulatis, foliaceis. *Corolla* hypocrateriformis: fauce nunc ventricosa; limbo patenti, 5-lobo, 5-plicato. *Stamina* 5, fauci v. tubo inserta, parùm inæqualia: *filamenta* elongata, infernè adnata: *antheræ* subrotundæ, bilobæ, biloculares: *loculis* basi parùm divergentibus, apice distinctis, rimâ longitudinali exteriùs dehiscentibus. *Ovarium* biloculare, basi disco cyathiformi cinctum. *Stylus* ancipiti-compressus, glaber, apice dilatatus. *Stigma* reniforme, compressum, v. capitatum, viscidum, nunc minutissimè papillosum: *lobis* connato-applicatis, margine revolutis, subinde sulco medio distinguentibus. *Capitulo* ovata, bilocularis: *valvulis* bifidis. *Dissepimentum* contrarium (facie ad caulem,) undique rumpens, tandem solutum. *Placentæ* 2, septo adnatæ. *Semina* subreniformia: *testâ* crustaceâ, scrobiculatâ: *albumen* carnosum. *Embryotes*, arcuatus, albus: *cotyledones* lineari-oblongæ, plano-convexæ: *radiculâ* cylindricâ, cotyledonibus paulò longiori, obtusâ, hilo proximâ.—*Herbæ* (Amer. Austr.) glandulosæ, radice fibrosâ, sæpiùs annuâ. *Folia* sparsa, integerrima, nunc rarè subopposita. *Flores* solitarii, pedunculati, speciosi, albi v. purpurei. *D. Don*, in *Edin. Phil. Journ.* Oct. 1832. (*Char. parum mutat.*)

* *Corollæ* tubo filiformi, fauce coarctatâ, staminibus erectis subæqualibus: summo tubo insertis, stigmatè complanato. *Nierembergiæ* propriæ. *D. Don Mss.*

N. gracilis, foliis lineari-spathulatis, laciniis calycinis lineari-lanceolatis acutis, corollæ limbo tubo breviorè, caule ramosissimo diffuso. *D. Don Mss.*

Nierembergia gracilis. *Hook. in bot. mag. t. 3108. Grah. in Ed. Phil. Journ.* Oct. 1831.

Herba diffusè ramosissima, pubescens, palmaris, spithamæa. *Radix* fibrosa, annua. *Rami* filiformes. *Folia* sparsa, lineari-spathulata, acutiuscula; *superiora* angustiora linearia; unguicularia v. semipollicaria. *Flores* breviter pedunculati, racemoso-paniculati. *Pedunculi* oppositifolii, filiformes, unguiculares, pube incanâ glandulisque pedicellatis copiosè vestiti. *Calyx* tubuloso-campanulatus, 10-nervius: nervis viridibus; *alternis* sinibus insertis, apice bifurcatis; *interstitiis* membranaceis: *limbo* 5-partito: *laciniis* lineari-lanceolatis, acutis, subcarinatis, patentibus. *Corolla* hypocrateriformis, albida, colore sæpè dilutissimè purpureo suffusa, extùs parcè glandulosa: *tubus* filiformis, ferè pollicaris: *limbus* 5-lobus, 5-plicatus, patulus, fauce coarctatâ, flavâ: *lobis* rotundatis, crispatis, brevissimis. *Stamina* 5, faucis ori inserta, erecta, subæqualia: *filamenta* compressiuscula, parcè glandulosa, luteo-albicantia: *antheræ* biloculares, adprimùm circa stigma conglutinatæ, flavæ: *loculis* distinctis, longitudinaliter dehiscentibus. *Ovarium* biloculare, basi disco membranaceo cyathiformi circumcingens: *loculis* polyspermis. *Stylus* ancipiti-compressus, apice dilatatus, subalatus. *Stigma* complanatum, lunatum, glutinosum: *lobis* connato-applicatis, lateribus compressis, angulis posterioribus productis arcuatis. *D. Don Mss.*

The chief distinction between *Nierembergia* and *Petunia* lies in the form of corolla; the tube in the former being equally contracted throughout its whole length, and the stamens inserted in its mouth; while, in the latter, the tube is dilated upwards, and the stamens inserted within it, at the point where the contraction terminates; but, as these characters are found to vary much in different species, I have, already proposed to unite them into one, being convinced, that, among the *Solanææ*, the form of corolla is seldom available as a generic distinction.

The genus is chiefly distinguished from *Nicotiana*, (which the form of corolla is, also, very variable in different species,) by the foliaceous segments of its calyx, which together with its nearly regular pentandrous flower, separate it, also, from *Salpiglossis*, in which the corolla is irregular and somewhat bilabiate, with only four perfect stamens. The stigma in this last is precisely that of the normal group *Nierembergia*, and the genus is principally remarkable for its lobed leaves. For the other section, I would propose the following character:—*corollæ fauce dilatata sæpius ventriculata staminibus inæqualibus tubo medio insertis subinclusis, stigma subcapitato*. To the latter section belongs *Salpiglossis integrifolia*, of Hooker, for which I would suggest the name *Nierembergia (Petunia) phænicea*.

The present species is a native of the vicinity of Buenos Ayres, where it was discovered by Dr. Gillies, and Mr. Tweedie, and, from seeds, transmitted by the latter, our valued friend, Mr. Neill, plants were raised, which blossomed in his interesting collection at Canonmills, in the Autumn of last year. The plant, like many others of the same natural family, although apparently annual, will continue to flourish for several years, if kept in the greenhouse, and is readily increased by cuttings; for, from some unknown cause, it is rarely found to perfect its seeds in this country.

Our drawing was taken at Colvill's Nursery, King's Road, Chelsea, in August last.

The genus was dedicated by Ruiz and Pavon, to Joseph Eusebius Nierembergius, a learned Spanish Jesuit, Author of *Historiæ Naturæ Libri*. D. Don Mss.



1. Calyx. 2. Corolla. 3. Pistil.





Plant 30

Pub. by J. Ridgway Am. J. B.

26

CONVOLVULUS Scammonia.

Officinal Scammony.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CONVULVULACEÆ. *Brown prodr.* 1. p. 481.

CONVOLVULUS. *Calyx* 5-partitus, nudus, v. bracteis 2 minoribus imbricatus. *Corolla* campanulata, 5-plicata. *Stamina* limbo breviora. *Ovarium* 2-loculare (rard 3-loculare?) loculis dispermis. *Stylus* indivisus. *Stigmata* 2, filiformia. *Capsula* valvata.—*Herbæ* (rard Frutices,) *volubiles* v. *prostratæ*, sæpiùs *lactescentes*. *Brown prodr.* 1. p. 482.

C. Scammonia, foliis sagittatis posticè truncatis, pedunculis teretibus subtrifloris, bracteis lanceolatis a calyce remotis. *Smith prodr. fl. græc.* 1. p. 132. *Fl. græc.* 2. p. 76. t. 192.

Convolvulus Scammonia. *Linn. sp. pl.* p. 218. *Willd. sp. pl.* 1. p. 845. *Hort. kew. ed.* 2. 1. p. 328. *Woodv. med. bot.* 1. p. 13. t. 5.

C. Syriacus, et **Scammonia Syriaca.** *Tourn. inst.* p. 83. *Moris. hist.* 2. 12. sect. 1. t. 3. f. 5. *Mill. ic.* 1. p. 68. t. 102.

Scammonia Syriaca. *Bauh. pin.* p. 294.

Scammonium Syriacum. *Ger. em.* p. 866.

Scammonea. *Matth. valgr.* 2. p. 601.

Root perennial, fusiform, very long, of a whitish colour, and abounding in an acrid, milky juice. *Stems* many, herbaceous, branching, slender, twining, leafy, round, and like the rest of the plant, quite smooth, extending often to the length of 10 or 15 feet; the *upper part* slightly angular, with rather prominent reddish lines. *Leaves* alternate, stalked, arrow-shaped, ovate-lanceolate, acute, perfectly entire, smooth, veiny, especially underneath, and of a dark green, about two inches long: *posterior lobes*, truncate, with pointed angles. *Footstalks* semi-cylindrical, slightly channelled above, scarcely equalling the breadth of the posterior lobes of the leaf. *Peduncles* axillary, single, 3-flowered, filiform, about twice as long as the leaves. *Pedicles* scarcely longer than the calyx, rather thickened at the top. *Bractæ* 2, opposite, lanceolate, pointed, spreading, situated at the insertion of the pedicles, with a pair of smaller

seated above the base of the lateral one. *Calyx* imbricate, with unequal, broadly elliptical leaflets; their edges coloured, waved, and somewhat repand, with a short reflexed, abrupt point. *Corolla* campanulate, thrice longer than the calyx, with a widely spreading plaited limb, the colour of a milk white, the underside marked with 5 greenish purple stripes. *Stamens* 5, erect, connivent, whitish, thrice shorter than the corolla. *Style* the length of the stamens. *Stigmas* oblong, erect, distant, white. *Capsule* ovate, pointed, smooth, unilocular, with four thin almost membranous valves. *Seeds* four, erect, grey, 3-sided, the outer side convex.

Independent of the interest attached to the plant, as affording a useful medicine, its beauty claims for it a place in the flower garden, being not unlike our common bindweed in habit, and its blossoms equally showy. The plant delights in a warm situation, and a light soil, and, if trained to a stake, or other support, it will extend its stalks to 10 or 15 feet, which are highly ornamental when in flower, being then copiously adorned with large white blossoms. The scammony that comes from Aleppo, which is also that of the shops, is the produce of this plant, that of Dioscorides being, according to the learned Sibthorp, *Convolvulus farinosus*, which is distinguished by its pubescent stem and cordate leaves, smaller flowers, of a light rose colour, and found in Mysia, Livadia, and the Peloponessus. Dr. Sibthorp found the present species growing wild in hedges in the Island of Rhodes.

Our drawing was taken at the Botanic Garden, belonging to the Company of Apothecaries, at Chelsea, in the course of last Summer. The plant was originally obtained from Smyrna, by Mr. Anderson. It is perfectly hardy, and continues in blossom until late in Autumn, and may be increased by seeds, or parting the roots.

The generic name alludes to the twining habit of many species of this genus, and is derived from the Latin verb *Convolvo*, to turn round, or entwine. *D. Don Mss.*



1. Calyx. 2. Part of the Corolla, showing the insertion of the Stamens. 3. Pistil.
4. Capsule.





Walt.

Pub by J. Ridgway Jan 1833

Walt.

LOBÈLIA speciosa.

Showy Lobelia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.
Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.
LOBELIA. Suprà fol. 86, series 2.

L. speciosa, velutina; foliis sessilibus lanceolatis acutis denticulatis, racemo laxo spicato, pedunculis bibracteatis, calycum sinubus reflexis.
Lobelia speciosa. *Hortulan. Bot. Reg. t.*

The whole herb is clothed with a short, downy pubescence. *Root* perennial. *Stems* upright, round, often furnished with a few branches at the top, from three to five feet high. *Leaves* sessile, lanceolate, acute, the margin purplish, and furnished with minute teeth, the *lower ones* from 3 to 7 inches long, and attenuated at the base. *Flowers* many, disposed in loose, terminal, unilateral, leafy clusters. *Peduncles* very short, cylindrical, furnished at the middle with two small, lanceolate bractæ, and at the base with a large, leafy, serrulate one. *Calyx* 5-cleft: *segments* lanceolate, acuminate, minutely toothed, the edges recurved, and slightly waved. *Corolla* the size of *L. fulgens*, of a bright, velvety purple, bilabiate, and cleft along the back. *Segments* lanceolate, acute, the two upper ones narrower, and spreading at right angles. *Filaments* united, dark purple. *Anthers* imperfectly developed, of a sulphur colour, and bearded at the top. *Style* thick, cylindrical, incurved at the top. *Stigma* large, bilabiate, pruinose, the edges slightly revolute, furnished at the base with a circular spreading fringe.

This showy hybrid was, we were informed by our friend, Mr. Mackay, of the Dublin Botanic Garden, detected in a border composed of *Lobelia fulgens* and *cærulea* in a garden in Ireland, but the name of the place we do not, at present, re-

member. Its habit is more robust than that of either parent, and the colour of the flowers, as might be expected, exactly intermediate, being of a rich purple. The plant does not produce seeds, but it appears to grow freely, and is easily increased by parting the roots. It is equally hardy with *L. fulgens*, and, like the other North American species of the genus, it delights in a soil composed of two parts of peat, or vegetable earth, one of loam, and another of river sand.

The generic name is already explained at fol. 86.



1. Stamens and Pistil. 2. Stamen separate. 3. Pistil separate.





BÉLLIUM bellidioides.

Lesser Daisy.

Class & Order. SYNGENESIA POLYGAMIA SUPERFLUA.

Natural Order. COMPOSITÆ. *Adans. fam. 2. p. 103. Fam. VII.*

ASTEREÆ. Cass. **Trib. BELLIDEÆ.**

BELLIUM. *Involucrum* duplici ordine polyphyllum, æquale, hemisphæricum. *Receptaculum* conicum, nudum. *Flosculi radii* ligulati, fœminei; *disci* hermaphroditi, tubulosi, 4-5-dentati. *Antheræ* basi muticæ. *Stigmata* hermaphroditis ovato-lanceolata, densè papillosa; radiis linearia, obtusa, canaliculata, lævia. *Achenia* cuneata, compressa. *Pappus* duplex; *exterior* 4-8-paleaceus, brevis; *interior* pilis 4-8, scabris.—*Herbæ* (Europ. et Orient.) *perennes, cæspitosæ, pusillæ*. *Folia integra, plerumque radicalia*. *Scapi v. pedunculi filiformes, nudi*. *Capitula solitaria*. *Radius albus*. D. Don Mss.

B. bellidioides, foliis spathulatis integerrimis, flosculis disci 4-dentatis tetrandris! stigmatibus lanceolatis acutis, pappi paleis truncatis. D. Don Mss.

Bellium bellidioides. *Linn. mant. p. 285. Lam. dict. 5. p. 7. ill. t. 684. (optima.) Willd sp. pl. 3. p. 2122. Persoon. syn. 2. p. 459. Spreng. syst. 3. p. 573.*

Bellis droseræfolia. *Gouan ill. p. 69.*

Bellis maritima roris solis foliis, longissimo pediculo donata, cynræa. *Bocc. mus. p. 149. t. 107.*

Planta perennis, densè cæspitosa, pusilla, elegans. *Radix* fibrosa. *Folia* conferta, petiolata, spathulata, obtusa, integerrima, subcafnosa, avenia, glabra, nunc pilis raris adpressis instructa, vix 3 lineas longa. *Petioles* semicylindræci, graciles, semi-pollicares, pilosiusculi. *Scapi* erecti, uniflori, filiformes, tenuissimi, 3-pollicares, adpressè pilosiusculi. *Involucrum* hemisphæricum, duplici ordine polyphyllum: *foliolis* circiter 12, ovato-lanceolatis, obtusiusculis, adpressè pilosis, æqualibus, margine membranaceis, dorso obtusè carinatis, basi callosis. *Receptaculum* pyramidatum, tuberculatum, nudum. *Flosculi radii* 12, ligulati, fœminei, emarginati, rarè 3-denticulati, patentissimi, suprâ nivei, subtùs pallidè purpurei; *disci* hermaphroditi, tubulosi, 4-dentati: *dentibus* ovatis, imberbibus. *Stamina* 4, medio tubo inserta: *filamenti* capillaria, glabra, elastica: *articulo superiore* crassiori, brevissimo: *antheræ* aureæ, in tubum coalitæ, basi muticæ, appendiculâ ovato-lanceolatâ, acutâ, membranaceâ, parvâ coronatæ. *Stigmata* hermaphroditis apicibus lanceolatis, acutis densè papillosis; radiis linearia, obtusa, canaliculata, lævia, recurvata. *Stylus* teres, glaber. *Achenia* cuneata, ancipiti-compressa, adpressè pilosa. *Pappus* duplex; *exterior* paleaceus: *paleis* 4-8, oblongis, truncatis, sæpè erosis, scariosis, argenteis, brevibus; *interior* e pilis tenuissimis, paleolis numero æqualibus iisdemque alternantibus, albis, denticulato-scabris, compositus. D. Don Mss.

This charming little plant, which surpasses, even in elegance and beauty, our favourite native Daisy, is found wild in Corsica and the Balearic Islands, in dry maritime pastures. Although introduced many years ago, the plant is still rare in collections, being impatient of much wet, and very liable to be killed in the winter months, if left out in the open border; wherefore, it is advisable to keep it under the protection of a dry pit, or frame, during Winter. It begins to send forth its slender flower-stalks early in Summer, and continues for several months successively copiously adorned with its gay starry blossoms. The plant is usually marked in books as an annual; an error, most probably, derived from the inaccurate reference to Triumfetti, as it appears to be perennial in our gardens, and is stated to be so by the accurate Boccone. It is easily increased both by slips and seeds. The four-toothed tetrandous florets of the disk, and pointed stigmas, readily distinguish the species. Usteri states the rays of the pappus to be eight, but in my specimens they were often four, and sometimes five and six, in each series only. I have not referred to the often quoted figure of Triumfetti, (*Obs. t. 80.*) because that evidently represents *Bellis annua*, and not the present plant, for whose Italian habitat there appears no better foundation.

The generic and specific names allude to its close relationship to the Daisy, *Bellis*, which name is derived from the Latin *bellus*, pretty, and from which the present genus is chiefly distinguished by its paleaceous seed-crown. *D. Don Mss.*



1 & 2. Ray Florets. 3. Floret of the Disk. 4. Involucrum and Receptacle.



Flora 44

Pub. by J. H. Koenig, Jan. 1850

GLADIOLUS pudibundus.

Blush-flowered Corn-flag.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. Brown prodr. 1. p. 302.

GLADIOLUS. Suprà fol. 155. series 1.

G. pudibundus, floribus subresupinatis, genitalibus declinatis, perianthii tubo spathâ brevior : laciniis ovato-lanceolatis obtusis undulatis recurvato-patentibus.

Stem from two to three feet high, straight, cylindrical, smooth. *Leaves* broadly ensiform, acuminate, ribbed, of a pale green. *Flowers* large, of a brilliant rose colour, about 10 in number, distantly alternate, and disposed in a distichous spike, from the twisting of the base somewhat resupinate. *Spathes* composed of two valves, which are lanceolate, ribbed, terminated by a long sharp point, and rolled round the tube of the perianth; *the inner one* shorter. *Perianth* with the tube considerably shorter than the outer spathe; the *limb* divided into 6 broad, ovate-oblong, blunt segments, which are recurved at the points, and wavy at the margin; the *lower* 3 narrower, marked with a pale, whitish, lanceolate spot, having a deep red edge. *Filaments* and *Style* declinate, white. *Anthers* purple. *Stigmas* linear-cuneate, notched, concave, copiously papillose.

This is a hybrid offspring, we believe, between *Gladiolus cardinalis* and *blandus*, and was raised by the Honourable and Rev. William Herbert, to whom we are obliged for the specimen figured in the plate. It is an extremely showy plant, and therefore cannot fail to become an universal favourite with

florists. It will doubtless require the same treatment as *G. cardinalis*, and, like it, readily increased by offsets.

The generic name, meaning, literally, a small sword, refers to the sword-shaped leaves common to this genus.



1. Portion of the tube of Perianth, with Stamens.
2. Style and Stigmas.





CALOPHANES oblongifolia.

Spotted-flowered Calophanes.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. ACANTHACEÆ. *Brown prodr.* 1. p. 472.

CALOPHANES. *Calyx* profundè 5-partitus, æqualis: *laciniis* subse-
taceis. *Corolla* infundibuliformis: *fauce* ventricosâ, subcampanulatâ: *limbo*
5-lobo, subæquali. *Stamina* 4, antherifera, inclusa. *Antherarum loculis* pa-
rallelis, basi calcaratis. *Stigma* simplex. *Ovarii loculis* dispermis. *Capsula*
teretiuscula, sessilis. *Semina* retinaculis subtensa.

Herbæ (Amer. Boreal.) *perennes*, *caulibus erectis*, *subsimplicibus*.
Flores axillares, solitarii, bibracteati. D. Don Mss.

C. oblongifolia, foliis spathulatis, corollæ tubo calyce subduplò breviori.
D. Don Mss.

Ruellia oblongifolia. *Michx. fl. amer. bor.* 2. p. 23. *Pursh fl. amer. septr.* 2.
p. 420. *Elliott car.* 2. p. 110.

R. biflora. *Linn. sp. pl.* 2. p. 886?

R. minore folio, floribus gemellis. *Dill. elth.* p. 331.

A dwarf, tufted, herbaceous perennial, with numerous simple, slender, obtusely four-cornered stems, scarcely exceeding half a foot in height, and clothed with a soft hoary pubescence. *Root* creeping. *Leaves* opposite, on very short footstalks, perfectly entire, narrowed towards the base, rounded at the apex, green above, paler and hoary beneath; lower ones obovate; the upper ones oblong, or rather spathulate, hardly an inch long. *Flowers* axillary, solitary, on very short peduncles. *Calyx* deeply parted into five, long, slender, subulate, rather bristle-shaped, segments, and furnished at the base with two oblong leafy bractes. *Corolla* rather longer than the calyx, funnel-shaped, ventricose, somewhat campanulate, with five rounded, nearly equal, entire lobes, slightly pubescent, of a pale azure; the lower lobe marked with numerous irregular, purple spots. *Stamens* 4, didynamous, inclosed in the corolla. *Filaments* compressed, fringed, dilated towards the base. *Anthers* erect, oblong, blunt,

2-celled : *cells* parallel, opening lengthways, the base free, and slightly spreading, and furnished with a very short incurved spur. *Connective* narrow, prominent. *Ovarium* oblong, cylindrical, with two ovules in each cell. *Style* slender, filiform, hairy. *Stigma* small, undivided. *Capsule* siliquiform, about half an inch long, 2-celled : *cells* crustaceous. *Dissepiment* parallel, the edge towards the axis, separating longitudinally in the middle, and so much thickened at the end as to fill nearly the whole cell. *Seeds* 2 in each cell, rounded, ovate, mucronulate, covered with a silvery pellicle ; the edges blunt and even. *Retinacula* thick, horny, acute, incurved, shorter than the seed.

This is by far the prettiest of the extratropical *Acanthaceæ*, and is really an interesting addition to our hardy border flowers. It is a dwarf herbaceous perennial, requiring to be planted in a mixture of loam and peat, and is readily increased by parting the roots. It is a native of Carolina, and has been but recently introduced by Mr. Dennis, from whose collection our drawing was taken in August last. The genus is essentially distinguished by having an ovarium with two-seeded cells, and the anthers spurred at the base.

We think it probable, that *Ruellia ciliosa*, and *hybrida*, and some other North American species, will be found to belong to this genus ; but our materials do not enable us to settle that point at present.

That this is the *Ruellia biflora* of Linnæus, we cannot take upon ourselves to say, as there is no authentic specimen in his Herbarium, the one under that name being from Jamaica, and a totally different plant.

The name alludes to the showy appearance of the plant, and is compounded of *καλος*, beautiful, and *φαινω*, to appear. *D. Don Mss.*



1. Calyx. 2. Corolla laid open. 3. Pistil.



Pinus densata Lindl. & Mill.

BARTONIA albescens.*White-stalked Bartonia.***Linnean Class and Order. POLYANDRIA MONOGYNIA.****Natural Order. LOASEÆ.** *Juss. in ann. mus. 5. p. 18.*

Calyx tubulosus, adhærens: limbo 5-partito, persistenti. *Petal*a 10, duplici ordine limbo calycino inserta. *Stamina* indefinitè numerosa, calycis limbo inserta: filamenta libera; exterioribus nunc sterilibus: antheræ erectæ, biloculares. *Stylus* 3-7-sulcatus. *Stigmata* 3-7, nunc soluta, inde coalita. *Cap*sula 1-locularis, 3-7-valvis, polysperma. *Placentæ* 3-7, lineares, parietales. *Semina* duplici serie creberrima, suborbiculata, compressa, margine membranacea.

Herbæ (plerumque Boreali-Americanae) erectæ, ramosa, aculeis minutissimis scabra, radice annuâ v. bienni. *Folia* alterna, sessilia, pinnatifida. *Flores* terminales, solitarii, albi. *D. Don* Mss.

* *Stamina* pauciora, filamentis omnibus dilatatis, antheris subrotundis, stigmatibus 3 solutis, capsulâ placentis 3. *Species* Australes.

B. albescens, foliis sinuatis, petalis vix calyce longioribus, filamentis omnibus dilatatis, antheris subrotundis muticis, stigmatibus 3 solutis. *D. Don* Mss.

Bartonia albescens. *Gill. & Arnott in Edinb. geogr. journ. 2. p. 273.*

Root annual. *Stem* upright, branched, cylindrical, leafy, a grey or ash colour, from a foot to three feet high, occasionally equalling the thickness of one's finger, clothed with short pubescence, intermixed with minute bristly points. *Leaves* alternate, sessile, oblong, obtuse, sinuately pinnatifid, with shallow, broad, obtuse lobes, rough, with very short callous bristles, from an inch and a half to seven inches long, and from half an inch to two inches broad; the upper ones generally acute, and sometimes entire; the base broad and transverse, often slightly clasping the stem. *Flowers* solitary, terminal, of a pale yellow colour; the smallest of the genus. *Calyx* tubular, slightly attenuated at the base, half an inch long, rough with minute bristles; the limb urceolate, with five ovate-lanceolate, attenuated teeth, with their

edges slightly involute. *Petals* 10, lanceolate, mucronulate, scarcely half an inch in length. *Stamens* fewer than in the other species, inserted round the mouth of the calyx. *Filaments* all dilated, linear, channelled, smooth, with a conspicuous midrib; the edges almost membranous. *Anthers* erect, attached by the base, small, round, pointless, composed of two parallel, connate cells, which open longitudinally. *Style* short, 3-sided. *Stigmata* 3, narrow, semicylindrical, obtuse, rarely united. *Capsule* tubular, scarcely an inch in length, apparently 3-valved. *Seeds* numerous, nearly orbicular, compressed, with a membranous border, attached to three linear, parietal placentæ. *D. Don Mss.*

This curious plant, the plainest of a very shewy genus, is another of Mr. Cuming's Chilian novelties, and was raised by Mr. Lambert, from seeds received from that enterprising collector. The specimens, whence our drawing was taken, flowered at Boyton, in the beginning of November. It is a hardy annual; but the plant should be raised in a frame, in order to get it into blossom sufficiently early to perfect its seeds. The species was originally discovered by our indefatigable friend, Dr. Gillies, occupying dry-water courses in the province of Mendoza. The genus is chiefly confined to the western regions of North America, this being the only one yet found in the southern hemisphere; where, with the exception of *Bartonia*, the *Loaseæ* may be said to be peculiar. The present species, it will be seen, constitutes a different section of the genus.

The genus was dedicated by Nuttall, to the late Dr. Benjamin Smith Barton, Professor of Botany in the University of Pennsylvania, Author of some tracts on the Natural History of the United States. *D. Don Mss.*



1. Calyx. 2. Petals. 3. Stamen. 4. Style.

[REDACTED]

ŒNOTHERA concinna.

Pencilled Tree Primrose.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. ONAGRARIÆ. *Juss. in ann. mus.* 3. p. 315.

Trib. 3. ONAGRÆÆ. *Dec. prodr.* 3. p. 40.

ŒNOTHERA. *Calycis apice* tubuloso limboque 4-partito deciduis. *Petala* 4. *Stamina* 8. *Stigma* 4-fidum, quandoque lobis connatis indivisum, capitatum. *Capsula* adhærens, 4-locularis, 4-valvis, polysperma. *Semina* angulata, nuda, placentæ centrali, demùm liberæ inserta. *Plantæ* (Americanae) plerumque herbaceæ. *Folia* alterna. *Flores* axillares, solitarii, rarò subspicati, terminales, sæpiùs flavi. D. Don Mss.

Œ. concinna, villosa; foliis lanceolatis acuminatis dentatis, petalis bilobis, capsulis arcuatis subteretibus quadricostatis, caule procumbente. D. Don Mss.

The whole plant thickly clothed with soft, silky hairs. *Root* apparently annual. *Stems* round, procumbent, much branched, from a span to a foot and a half in length, purplish, woody at the base. *Leaves* sessile, lanceolate, or linear-lanceolate, acuminate, toothed, recurved and spreading, slightly waved, scarcely narrowed at the base, from an inch and a half to two inches long. *Flowers* axillary, solitary, about twice the size of those of *Œ. rosea*. *Tube of the calyx* quadrangular, shorter than the ovarium, of a pale rose-colour. *Segments* lanceolate, pointed, hairy, generally united by pairs, along their whole length. *Petals* 4, obcordate, cloven at the top, rather longer than the calyx, of a pale rose-colour, elegantly pencilled with branching veins, of a deeper tint. *Stamens* 8, the alternate ones shorter. *Filaments* slender, white. *Anthers* yellow, incumbent, mucronulate. *Ovarium* quadrangular, narrow, equal, scarcely half an inch long. *Style* filiform, white, longer than the stamens. *Stigma* white, with 4, oblong, obtuse, spreading lobes, the edges revolute, and the upper surface covered with minute papillæ. *Capsule* nearly cylindrical, with four pro-

minent ribs, curved, about half an inch long, hairy, 4-celled, 4-valved, many-seeded. *Seeds* oblong, angular, smooth and glossy, of a dark brown colour. *D. Don Mss.*

This pretty dwarf species of *Ænothera*, which does not appear to have been noticed by any author, is a native of Chile, and was introduced last year, from seeds collected in that country by Mr. Hugh Cuming. The plant was raised by Mr. Lambert; and it blossomed, for the first time, in September last. It is a hardy annual, of easy culture. The undivided leaves, smaller flowers, and cloven petals, will readily distinguish the species.

The generic name is already explained at fol. 19.

By the inadvertence of the artist, the flowers are erroneously represented as hexandrous, with a five-lobed stigma, in the plate. *D. Don Mss.*



1. Calyx. 2. Six of the Stamens. 3. Style.





Illustr. 10 to *Thalysia* *Alonso, 1900*

LIATRIS odoratissima.

Vanilla-scented Liatris.

Class and Order. SYNGENESIA POLYGAMIA ÆQUALIS.

Natural Order. COMPOSITÆ. *Adans. fam. 2. p. 103.*

Fam. V. EUPATOREÆ. *Cass.*

LIATRIS. *Involucrum* polyphyllum, imbricatum. *Receptaculum* glabrum, punctatum. *Flosculi* 5 v. 10, infundibuliformes: *limbo* 5-fido, patenti. *Antheræ* inclusæ, basi muticæ. *Styli rami* clavati, longissimi, patentes, minutè papilloso. *Achenia* elongato-turbinata, compresso-quadrangula, 10-costata, pilosa, basi attenuata. *Pappi radiis* duplici ordine copiosis, plumosis, v. setaceis, scabris, persistentibus.

Herbæ (Amer. Boreal.) *perennes*. *Folia sparsa*. *Inflorescentia terminalis*. *Pappus sæpè coloratus*. *D. Don Mss.*

* *Involucris squamis inappendiculatis, pappo setaceo scabro. Herbæ radice fibrosâ, foliis dilatatis, inflorescentiâ paniculatâ. Trilisa.*

L. odoratissima, glabra; foliis caulinis superioribus amplexicaulibus, involucris squamis ligulatis obtusis, capitulis 10-floris. *D. Don Mss.*

Liatris odoratissima. *Willd. sp. pl. 3. p. 1637. Mich. fl. amer. bor. 2. p. 93.*

Pursh fl. amer. septr. 2. p. 510. Elliott car. 2. p. 283.

Anonymos odoratissimus. Walt. fl. car. p. 198.

Root perennial, fibrous. *Stem* about five feet high, upright, simple, cylindrical, smooth and solid, of a purplish hue, the thickness of a writing quill. *Leaves* thick, coriaceous, smooth and shining, and, like the rest of the plant, copiously besprinkled with minute crystalline dots; *radical ones* spathulate, blunt, entire, or occasionally toothed, from 8 to 9 inches long, and about 3 inches broad; narrowed towards the base, furnished with a stout midrib, which becomes so attenuated, near the top, as to be scarcely distinguishable; *those of the stem* furnished with a few large coarse teeth; lower ones spathulate, resembling the radical ones; upper ones clasping the stem, ovate-oblong, slightly conduplicate, from 2 to 4 inches long, and furnished with 5 nerves. *Panicle* corymbose, large, and spreading. *Capitula* about the size of those of *Stevia purpurea*. *Peduncles* angular, glabrous. *Bractes* ligulate, obtuse, glabrous, adpressed, coriaceous, 3 lines long. *Involucrum* imbricate, polyphyllous; the scales narrow, strap-shaped, obtuse, adpressed; the innermost membranous, and mucronulate. *Receptaculum* flat, glabrous, dotted.

Florets about 10, funnel-shaped, five-toothed, purple, copiously besprinkled with minute crystalline bodies. *Tea* ovate, mucronulate, naked. *Filaments* compressed, smooth, the upper joint very short and filiform. *Anthers* blackish inclosed, united into a tube, naked at the base, and crowned by an oval, obtuse, membranous, coloured appendage. *Style* filiform, smooth; the branches narrow, clavate, obtuse, compressed, very long and spreading, twisted, covered with minute papillæ; the stigmatic surfaces, narrow, linear, scarce prominent, abruptly terminating just below the middle of the branches of the style. *Achenia* turbinate oblong, attenuated at the base, obsoletely four-sided, clothed with short hairs, furrowed, and marked with ten elevated ridges. *Pappus* pale red; the rays copious, unequal, bristly, rough, and persistent, disposed in a double series, and shorter than the corolla. *D. Don Mss.*

A hardy perennial, native of Carolina, and was cultivated by Mr. Lambert about twenty years ago; but the plant had disappeared from the collections, until again introduced last year, by Mr. Dennis, in whose Nursery, at Grosvenor Row, Chelsea, the plant whence our drawing was taken flowered in the beginning of November last. It is known in North America, by the name of “Carolina Vanilla Plant” from the delightful fragrance it diffuses, resembling that yielded by a recently cut hay field, abounding in the vernal grass, (*Anthoxanthum odoratum*.) The smell of the dried herb is even more agreeable; and specimens still retain their fragrance after having been kept in the Herbarium more than twenty years. The plant requires a peat soil, and it should be freely supplied with water, when in a growing state. It is increased by parting the roots. The pappus, whether simple or feathery, is a character of little importance in this genus; and I, therefore, gladly concur with M. Lessing, in retaining it entire. The genus is chiefly distinguished from *Eupatorium*, by the rays of the pappus being disposed in a double series. In *Liatris elegans*, (*Calostele nobis*,) however, the rays of the pappus are arranged in a single series only.

The name *Liatris* was employed by Schreber, to denote this genus, but of its signification he makes no mention. *D. Don Mss.*



1. Floret. 2. Stamen. 3. Style. 4. Ovarium. 5. Rays of the pappus magnified.





L. candida

2249. *Or. speciosa* (L.)

LILIUM Catesbæi.

Catesby's Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. LILIACEÆ. *Brown prodr.* 1. p. 295. *in notâ.*

LILIUM. *Perianthium* 6-phyllum, coloratum, deciduum: *foliolis* basi sulco nectarifero plerumque exaratis. *Stylus* elongatus. *Stigma* indivisum; *Capsula* trigona, 3-locularis, 3-valvis, polysperma. *Semina* complanata, margine obtusa: *testâ* spongiosâ.

Plantæ (hemisphærii boreal. zonis temperatis propriæ) *bulbosæ*, *bulbis squamatis*. *Folia nunc verticillata*. *Flores colore vario, nequaquam cærulei*. D. Don Mss.

L. Catesbæi, foliis sparsis, flore erecto solitario, perianthii foliolis lanceolatis acuminatis undulatis: unguibus angustatis laminâ dimidio brevioribus. D. Don Mss.

Lilium Catesbæi. *Walt. car.* p. 123. *Willd. sp. pl.* 2. p. 86. *Mich. fl. bor. amer.* 1. p. 197. *Bot. Mag.* t. 259. *Dryander in hort. kew.* 2. p. 241. *Pursh fl. amer. septr.* 1. p. 228.

L. carolinianum. *Lam. encycl.* 3. p. 554.

L. spectabile. *Salisb. ic. rar.* t. 5.

L. carolinianum, flore croceo punctato, petalis longioribus et angustioribus. *Catesb. car.* 2. t. 58.

Bulb round, rather larger than a walnut. *Stem* upright, simple, round, smooth, purplish, seldom exceeding a foot and a half in height. *Leaves* alternate, lanceolate, or linear-lanceolate, acute, an inch or two in length, smooth, and even, sometimes, but rarely, verticillate. *Flowers* erect, solitary, campanulate, large, and showy. *Leaves of the perianthium* rather open and spreading, lanceolate, or ovate-lanceolate, acuminate, smooth and naked, wavy at the margin, the points recurved; the colour of an orange scarlet, with a large, round, yellow blotch, marked with several orbicular, dark brown spots at the base of each lamina; the underside of a dull yellow. *Claws* narrow, linear, incurved, greenish, about half the length of the lamina; the alternate ones compressed. *Stamens* 6, nearly equal, shorter than the perian-

thium. *Filaments* slender, smooth, connivent towards the base. *Ovarium* 3-sided, pale green. *Style* rather longer than the stamens, 3-sided, smooth. *Stigma* large, clavate, dark red, papillose, with three prominent angles.

Although introduced in 1787, this very elegant Lily is still rare in collections, the roots increasing very sparingly, and the seeds being seldom perfected in this climate. A native of Virginia and Carolina, in low, open, mossy swamps. It is quite hardy, produces its brilliant blossoms in June, and thrives best in a peat soil.

Our drawing was derived from Mr. Dennis's Nursery, Grosvenor Row, Chelsea; where we have remarked a smaller variety, with much narrower leaves, and the segments of the perianthium more attenuated towards the base. *D. Don Mss.*



1. Unexpanded flower. 2. Stamen. 3. Pistil.



HELLÉBORUS niger var. vernalis.*Vernal Black Hellebore.**Linnean Class and Order.* POLYANDRIA POLYGYNIA.*Natural Order.* RANUNCULACEÆ. *Juss. gen. p.* 281.*HELLEBORUS.* Suprà fol. 109. Series 1.*H. niger*, foliis pedatisectis glabris, scapo subnudo unifloro.*Helleborus niger.* *Linn. sp. pl. p.* 783. *Blackw. herb. t.* 506. 507. *Mill. dict. no. 2. Jacq. austr. t.* 201. *Lam. dict. 3. p.* 97. *Curt. bot. mag. t.* 8. *Bull. herb. t.* 33. *Willd. sp. pl. 2. p.* 1336. *Dec. fl. fran. ed. 3. 4. p.* 908. *Woodv. med. bot. 1. p.* 50. *t.* 18.*H. grandiflorus.* *Salisb. prodr. p.* 374. *Linn. Trans. 8. p.* 304.*H. niger legitimus.* *Clus. hist. 1. p.* 274. *Besl. hort. cyst. t. 1. fol. 1.**H. niger verus.* *Ger. herb.* 976.*H. niger*, flore roseo. *Bauh. pin.* 186.*H. niger*, foliis angustioribus. *Tourn. inst.* 272.*Helleborum nigrum.* *Math. comm. p.* 843.*Veratrum nigrum.* *Dod. pempt.* 385.*β. vernalis*, foliorum segmentis cuneatis obtusiusculis pallidè viridibus margine revolutis crebriùs serratis: dentibus obtusiusculis mucronulatisque, floribus majoribus.

Rather more dwarf and compact than the common variety. *Scapes* from 3 to 6 inches high, stout, round, or slightly compressed, mostly simple and one-flowered, but occasionally forked, about the thickness of a goose quill, smooth and glossy, marked with numerous irregular purple spots. *Leaves* tripartite, and septenately digitate: *segments* cuneate, lanceolate, blunt and mucronulate, coriaceous, yellowish green above, and marked with depressed, channelled veins, 2 to 5 inches long, paler beneath; the edges revolute, serrated from about the middle upwards, with broad, unequal, rounded, mucronulate, approximate teeth; the lateral ones connate; the middle one separate and distinct, with equal sides. *Foot-stalks* short, stout, and rounded, about 2 inches long, marked along the upper side with a shallow furrow. *Bractes* 2, ovate, membranous, mucronulate, or notched, wavy, pale

green, slightly tinged with purple. *Flower* large, terminal, about 3 inches across. *Calyx* of 5, large, obovate leaves, pure white, afterwards changing to a pale rose or purple, greenish yellow at the base, and traversed by numerous nerves. *Petals* funnel-shaped, pedicellate, pale green, with an obliquely truncate mouth, the edge revolute, yellow, slightly lobed and crenated, somewhat exceeding half the length of the stamens, and about twice the length of the slender white foot-stalk. *Stamens* apparently arranged, on the thick torus, in spiral lines: *filaments* cylindrical, white: *anthers* yellow, adnate, oblong, obtuse, opening longitudinally. *Pistils* about 6 or 7: *ovaria* compressed, keeled, united together at the base into a short thick column: *styles* slightly recurved, white, afterwards changing to a pale purple: *stigma* a small, abrupt, papillose dot.

Of the three varieties of the Christmas Rose, which we have observed in the gardens, the one now figured is, we think, entitled to the preference, as being less encumbered by foliage, and having the blossoms at least a third larger, and of a clearer colour. It flowers six weeks or two months later than the common kind. These varieties differ in their size, time of flowering, and in the form of the segments of their leaves, but they agree in the more essential parts of their structure. A botanist should be wary of making species out of long-cultivated plants; for they, like domestic animals, are much more prone to vary, than those in a wild state.

The leaf of the present variety is, probably, what Jacquin has represented separately, in the plate of the *Flora Austriaca*, above referred to.

Our drawing was taken at the Botanic Garden, Chelsea, in February.

The name is already explained at fol. 109, of the first series. *D. Don Mss.*



1. Petal.



I. sibirica L. f. *Fl. bor. Berl.* 1823. *Fl. bor. Berl.* 1823.

IRIS biglumis.

Glumaceous Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. Brown prodr. 1. p. 302.

IRIS. Suprà fol. 11 et 56. Series 2.

I. biglumis, imberbis; scapo subbifloro foliis breviori, spathâ diphyllâ subglumaceâ, perianthii laciniis subæqualibus, stigmatibus inciso-serratis, capsulis hexagonis. *D. Don Mss.*

Iris biglumis. *Vahl enum. 1. p. 149.*

I. an spuria? *Pall. it. 3. append. p. 26. t. c. f. 1.*

Root creeping. *Scape* round, about 3 inches high, entirely enclosed by a pair of leaves, from the bosom of which it issues. *Leaves* narrow, ensiform, acuminate, erect, rather stiff, and harsh to the touch, of a dull glaucous green, dark red at the base, exceeding the scape, and lengthening considerably after the flowering season. *Spathe* composed of two broad, ovate-oblong, acute, membranous, green, adpressed, nearly equal leaves; their edges scariose, and over-lapping each other towards the base. *Flowers* mostly 2, sessile, of a pale blue; the segments about equal in size and form, narrow, rather spathulate than lanceolate; the outer 3 reflexed, rather broader and paler than the inner ones, which are erect, but hardly connivent; the disk of a whitish colour, marked with numerous purple veins and spots. *Stigmas* linear, cloven, deeply and sharply serrated, of a deeper shade of blue. *Ovarium* about an inch long, marked with 6 furrows; the alternate ones rather deeper.

Very nearly related to *I. spuria*, but apparently distinct from all the varieties of that species by its shorter stem, broader and glumaceous bractes, and nearly equal segments of its flowers. A native of Siberia, where it was discovered by the celebrated Pallas, who has given a figure and description of the plant in his valuable travels. Our figure will

be found to differ in some respects from his; but we have no doubt of the identity of the two plants.

Introduced by Mr. Anderson, from seed communicated by Dr. Fischer.

Our drawing was taken at the Botanical Garden, Chelsea, in the early part of last Summer. It is found to thrive in a light soil.

The generic name is explained at fol. 11. *D. Don Mss.*



1. Stamens. 2. Stigmas.



St. Louis

St. Louis, Mo. April 1833

W. H. H. H.

NARCÍSSUS recurvus.

Drooping-leaved Narcissus.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Subordo V. NARCISSINÆ. *Haw. Monogr.* p. 1.

NARCISSUS. *Spatha* 1-3-flora. *Corona* parva, patellaris, corollæ sæpiùs nivæ laciniis multoties brevior, tota crocea seu flava, et margine croceo plerumque ornata. *Stamina* tubo adnata; 3 inferiora parùm inclusa; 3 superiora antheris semi-exsertis. *Haw. l. c.* p. 20.

N. recurvus, uniflorus; foliis semunciam latis perglaucis superne debilitè recurvo-dependentibus scapo humilioribus, corollæ nivæ laciniis imbricatis latè ovatis retusis cum mucrone lateribus inflexis, coronâ præplicatâ : ore crenulato croceo. *Nobis narciss. revis.* p. 151. *l. c.* p. 15.

The annexed figure represents one of the largest and latest flowering species of our restricted genus *Narcissus*, which is only surpassed in size and beauty by *N. patellaris*, of Salisbury, and our *N. Poëtarum*; and which last is the finest of all this fair and fragrant group.

All the species are probably indigenous to the southern countries of Europe, although two of them have been said to occur spontaneously in England. They are all perfectly hardy bulbous-rooted plants, and produce their flowers in April and May; the one here delineated, being nearly, or quite the latest of all, except the double flowered varieties; whose blossoms, in cool moist seasons, endure to the very end of May, even in the neighbourhood of London. They are to be increased abundantly by offsets in any soil or situation, but will not thrive well, and scarcely flower at all, in a poor, dry, or light one. But when seasonably transplanted every third year into deep, rich, and rather moist, or strong loamy soil, they will bloom very freely, and very perfectly; and are, when so treated, the most worthy of cultivation of the Narcissinean family; except alone, perhaps, the very delicately perfumed Jonquills; and even these, in size and beautiful colours, they very far surpass.

In poor, or very dry soils, the flowers of these fine plants, and more especially the double ones, are subject to

a very remarkable disease, which attacks them about the time they ought to escape from their membranous, and finally, scariose spathes, and prevents their being able to burst those filmy envelopes in the usual healthy manner. The blossoms appear to stagnate and die, imprisoned with them, at about one-third, or, occasionally, one half of the natural size; at which time the spathes seem somewhat pruned, or more inflated, than when in a healthy state; and when pressed by the fingers, burst, and give out the imprisoned, and, perhaps, unwholesome air; discovering the discoloured and only partially developed flower, as if it had been scalded by the heat of the sun's rays. This distemper the gardeners have a name for, and say, such flowers are *blind*. Now, this defect occurs much less frequently in *moist* than in *dry* seasons, it is probably occasioned by the sun's over-heating the air in the spathe, and exhausting the sap of the plant quicker than the roots in dry soils can supply it; and thus, as it were, scalding the nascent blossoms, before they have time to accomplish their full development, and escape from the unhealthy air* of the swollen and indurated spathe. Wherefore, it should seem, that poverty, and consequent want of vigour, is the predisposing, and at length efficient cause of this disease; and, if so, the remedy will doubtless be that of planting the flowering roots three or four inches deep over their crowns, in a strong, rich, and rather moist loamy soil, and, probably, in a somewhat shady situation, but not overhung by other plants; and, in dry weather watering the plants after the setting of the sun, but not much after the blossoms are expanded.

There is a variety, (*Narciss. Monog. l. c.*), with slender greener, and often less conspicuously drooping leaves, than the one we have here chosen to figure; but it has little other difference. Both are those snowy Narcissi, with crimson bordered cups, which adorn so abundantly the flower market of London in May; and those which ornament them in April, though rather smaller, but quite of equal beauty, belong to *Narcissus ornatus* of our *Monograph*, p. 20, which is distinguished well from *N. recurvus*, by its flattened crown as the latter is, from all others, by its drooping leaves, and broad but laterally inflected somewhat hollow petals.

A. H. H.

* I have let out this air with the point of a pin, in many stages of growth; but the process afforded neither advantage nor relief.



1. A flower spread open, to show the insertion of the stamens.
2. Pistil.





Stachys

Stachys recta L.

IRIS reticulata.

Netted Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. Brown prodr. 1. p. 302.

IRIS. Suprà fol. 11. et 56. series 2.

I. reticulata, imberbis ; perianthii segmentis interioribus lanceolato-spathulatis erectis elongatis, stigmatibus obtusis bilobis, foliis tetragonis, radice bulbosâ. *D. Don Mss.*

Iris reticulata. *Marsch. à Bieb. fl. taur. cauc. 1. p. 34. Cent. plant. rar. ross. 1. t. 11. Rœm. et Schult. syst. 1. p. 480.*

Root an ovate bulbous tuber, covered with several reticulated brown coats. *Leaves* issuing from a double spathaceous, pointed, keeled, membranous, unequal sheath, long, slender, hollow, tetragonal, glaucous, copiously furnished with minute, white dots, terminated by a white point, from a span to a foot or more in length; the sides concave, smooth, with a conspicuous nerve, and blunt angles. *Flowers* solitary, purple. *Peduncle* scarcely an inch long, 3-sided, compressed. *Spathe* composed of two, unequal, linear, mucronate, keeled, cartilaginous, nerved valves; the edges scarious, and convolute; the inner one smaller, obvolute, inclosed. *Perianthium*, the tube slender, obtusely 3-sided; about an inch and a half long, greenish white, and furrowed, the angles marked with a blue line: *outer segments* oblong, rather cuneiform, spreading, concave, with a stout greenish midrib, the ground of a pale purple, marked with deeper coloured veins, apex recurved, and slightly mucronulate, of a deep violet, rather inclining to blue towards the centre, which is furnished with an oblong orange spot, marked with violet dots; 3 *inner ones* erect, longer, lanceolate, or somewhat spathulate, bluntish, slightly waved, narrowed towards the base, of a uniform purple. *Ovarium* with 3 blunt angles, each furnished with an elevated ridge. *Stigmata* oblong,

about as long and rather broader than the outer segments of the perianthium, and of the same uniform purple colour as the inner segments; the upper lip of two rounded, finely serrated, recurved lobes; the lower one very short, and almost obsolete.

We are indebted to Messrs. Whitley, Brames, and Milne, of the Fulham Nurseries, for the opportunity of publishing a figure of this rare and beautiful *Iris*, which had been received by them from M. Hartwiss, Director of the Imperial Gardens, at Nikita, in the Crimea. It appears to have been first introduced to our gardens in 1821, but the plant was afterwards lost; and, we believe, it exists at present in no other collection than the one abovementioned, where it blossomed early in March last.

This remarkable species agrees with *Iris tuberosa* in its leaves, but the flower is very different, more resembling that of the normal group of the genus; and we know of no species with which it can well be compared; but in any arrangement it must be placed near to *Iris Xiphium*, and *Xiphioides*, to whom it approaches in habit, and in its bulbi-form roots. The species was originally discovered in Georgia by M. Adams, from whom the learned author of the *Flora Taurico-Caucasica* received it.

The plant requires a light rich soil, and the shelter of a pit or frame in Winter. It is increased by offsets, and by seeds, which may be made to perfect, if the season is favourable, and care is taken to protect the plant from the wet, and to admit a free circulation of air when it is in flower. —
D. Don Mss.

The generic name is already explained at fol. 11, and 56— of the present series.



1. Section of a leaf. 2. Outer segment of the Perianthium, with a Stamen and Stigma.



Fig. 1. *Trifolium repens* L.

HELLEBORUS lividus.

Three-leaved Hellebore.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen.* p. 231.

Tribus IV. HELLEBOREÆ. *Dec. syst.* 1. p. 306.

HELLEBORUS. *Suprà fol.* 109. series 1.

- H. lividus.** *Folia trisectis glabris: segmentis ellipticis: paginis discoloribus, petalis longitudinaliter fissis: oris integro, caule folioso multifloro.*
D. Don Mss.
- Helleborus lividus.** *Solander in Ait. kew. ed. 1. 2. p. 272. Bot. mag. t. 72.*
Willd. sp. pl. p. 1338. Salisb. in linn. trans. 8. p. 304. Dec. fl. fr.
ed. 3. 4. p. 907. Ejusd. syst. 1. p. 321. prodr. 1. p. 47.
- H. trifolius.** *Mill. dict. n. 4. non Linn.*
- H. triphyllus.** *Lam. dict. 3. p. 97.*
- H. fœtidus** var. *β.* *Linn. sp. pl. p. 784.*
- H. niger trifolius.** *Ald. h. farn. 93. t. 92. Moris. hist. 3. p. 480, t. 12.*
t. 4. f. 7. Tourn. inst. p. 272.
- Helleboraster indicus trifolius.** *Barr. ic. 1143.*

Stem upright, branched, generally twice forked, leafy, slightly angular and purplish, about seven inches high. *Leaves* ternately parted, the segments elliptical, pointed, minutely and sharply toothed, or sometimes entire, stiff and coriaceous, perfectly smooth, of a dull rather glaucous green above, marked with whitish veins, underneath of a livid purple, an inch and a half to three inches long, and from half an inch to an inch in breadth, intermediate one on a short stalk; the lateral ones quite sessile, with unequal sides. *Foot-stalks* an inch long, nearly round, stiff, of a purple hue, marked above with a shallow furrow, the base broad, concave, and clasping the stem. *Peduncles* angular, an inch long. *Bractes* half embracing the stem, ovate-oblong, mucronulate, the edges furnished with numerous small sharp teeth. *Calycine leaves* 6, elliptical, serrated at the apex, somewhat coriaceous, green, afterwards assuming a purplish hue; the outer 3 smaller, and pointed. *Petals* 11, small, unequal, tubular.

white, cleft almost to the base on the inner side, the apex truncate and quite entire, scarcely exceeding the footstalk in length. *Stamens* numerous, white, inserted in spiral lines on a conical torus. *Filaments* slender, white. *Anthers* roundish, compressed, 2-celled, the cells connate, and opening lengthways. *Pistils* 8. *Ovaria* compressed, keeled. *Styles* awl-shaped, recurved, purplish, marked along the inner surface with a shallow furrow. *Stigma* a small papillose point.

This is a very old inhabitant of the gardens, having been cultivated in the Farnese Gardens in 1625, and introduced to this country prior to the year 1710; but it is still however rare in collections. By Linnæus it was regarded as only a variety of *H. fœtidus*; and from its seldom or ever producing seeds in a cultivated state, I was led to suspect the plant might be of hybrid origin; but the discovery of its native country, which had remained long unknown, has dispelled these conjectures, and fully established its claims to specific distinction, being, perhaps, the most remarkable of the whole genus. It now turns out to be a native of Corsica, where it was found by Labillardière. The plant is rather too tender to be trusted out in the open border during Winter; and being extremely shy to cultivate, it is always better to keep it under the protection of a frame. It should be planted in a sandy loam, and is increased by suckers, which however are produced but sparingly.

Our drawing was taken from a plant which flowered in the Botanic Garden at Chelsea, in February last. *D. Don Mss.*

The generic name is already explained at fol. 109, of the first series.



1 and 2. Petals. 3. Torus with a single Stamen, and crowned by the Pistils.



Verb. Scutellaria May 1892

HERMIONE aperticorona.

Spreading Orange-crowned Hermione.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Subordo V. NARCISSINÆ. *Haw. Monogr.* p. 1.

HERMIONE. Suprà fol. 118. series 2.

H. aperticorona, subsexflora; corollæ laciniis subrotundo-ovalibus semi-reflexis valdè imbricatis tubo brevioribus flavis coronâ patulâ plicatim subrepandâ aurantiacâ sesquiduplò longioribus. *Nobis l. c.* p. 9.

This beautiful species of *Hermione*, comes into flower very soon after the more common *H. cupularis*, (the *Soleil D'or* of the gardens;) and although a smaller and paler flowered plant than that lofty species, its individual blossoms are sometimes larger, and, perhaps, more elegant and graceful.

The bulbous root, although I have cultivated the plant more than twenty years, I never saw half the size of a man's fist, which that of the *Soleil D'or* is said often to surpass. The *leaves* are 3 or 4 in number, strap-shaped, erect, shorter than the flower-stalk at the time of blooming, perhaps, flatter than usual among its nearest affinities, and likewise more blunt pointed; of a glaucous colour, or often nearly deep green, and slightly striated longitudinally; of the width in flowering plants of ten lines, but in younger plants far less. The *scape*, or *flower-stem*, is somewhat cylindraceous, less compressed, of the colour of, and striated like the leaves, and rises to the height of about 12 or 14 inches, which is little more than half that of the *Soleil D'or*. The *spathe*, or sheath which contains the flowers, is of a dark or brownish colour, and of a membranaceous or filmy texture, and becomes, finally, dry parched and scariose. The *flowers* appear in the middle of April, very soon after those of *H. cupularis*; they are in well-grown plants about 6 in number, forming an elegant umbel, and their 6 *segments*

are often semi-reflexed, of a broad oval form, and mutually imbricated; of a rich yellow colour, often shorter than the *tube*. The *crown* is ample (amongst its nearest affinities) and saucer-shaped, that being much more spreading upwards than in *Soleil D'or*; somewhat plaited and crenulate at the mouth, and nearly three times shorter than the *segments*, and of a bright orange colour. Three of the orange *anthers* are included within the *tube*, and three or more or less completely excluded beyond it. *Stigma* enclosed with 3 short lobes.

The *Hermione aperticorona*, being so nearly related to *H. cupularis*, as above shown, is probably a native, like the plant, of the northern coast of Africa, or of the Levant.

The greater part of this genus requires some slight protection in Winter, or the tops of their leaves will be killed by the frost, which greatly weakens their roots, often destroys their flower buds in early infancy, and sometimes paralyzes or even kills the plant. They thrive best in a rich loam manured soil of 2 feet deep, and in a warm situation. The crowns of their bulbs should be covered to the depth of 2, 3, or 4 inches, according to their size; and transplant them, when quiescent in July, or August, once every two or three years, carefully removing every offset from the flowering bulbs. If it should happen to be convenient, they may be kept out of the ground in any dry situation, like Tulips, but not exposed to much light, until the middle of November, but not longer with impunity, and then planted at least six inches from each other, if of the flowering size: but all offsets, at less distances, according to their respective sizes, and soon after they are taken up for if kept out of the ground they shrivel, and dry in the outer coats, and become invariably weakened and deteriorated. A. H. H.



1. The Corolla laid open, to shew the insertion of the Stamina. 2. Pistil.





Fig. 1. 1890. 1891.

Fig. 2. 1890. 1891.

Fig. 3.

LOASA álba.*White-flowered Loasa.***Linnean Class and Order. POLYANDRIA MONOGYNIA.****Natural Order. LOASEÆ. Juss. in ann. mus. 5. p. 18.**

LOASA. *Calycis limbo 5-partito, persistenti. Petala 10; interiora 5 (stamina mutata,) dissimilia, involuta, conniventia, biappendiculata apice lobata. Stamina fertilia numerosa, in 5 phalangibus collocata; sterilia 10, per paria petalis interioribus adnata, connectivo longè producto, filiformi. Antheræ subrotundæ, erectæ, biloculares. Stigma sæpiùs indivisum. Capsula turbinata, 1-locularis, 3-valvis, polysperma. Semina subrotunda, reticulata, placentis 6 geminatim contiguis inserta.*

Herbæ (Americæ australis) annuæ, pilis setaceis, prurientibus sæpè vestitæ. Folia petiolata, opposita v. alterna, plerumque lobata. Flores solitarii, pedunculati. D. Don. Mss.

L. álba, *canescens, hispida; foliis oppositis palmatis dentatis, laciniis calycinis lineari-elongatis, petalis saccatis: appendicibus exteriorum dolabratis aristatis. D. Don Mss.*

The whole plant clothed with minute hoary pubescence, intermixed with prurient bristly hairs. *Root* annual. *Stem* branched, spreading, about a foot high, round. *Leaves* opposite, cordate, palmate, with from 5 to 7 lanceolate, acute, toothed lobes; lower ones stalked; upper ones sessile, with rather narrower, and mostly entire lobes. *Flowers* axillary and terminal, mostly solitary, nodding. *Peduncles* filiform, about twice the length of the leaves. *Calyx* with 5 deeply parted, linear, or linear-lanceolate, acute, entire segments. *Petals* 10; the outer 5, large and spreading, hollow, saccate, unguiculate, inclosing the bundles of stamens, shorter than the calycine segments, and of a pure white colour; inner 5, obcuneately oblong, hollow, cloven at the top, involute at the margins, of a deep red, especially towards the base, and furnished with two small dolabriform bristle-pointed appendages, of the same colour. *Stamens*, the fertile ones very numerous, arranged in five bundles opposite the outer petals,

with slender capillary filaments; sterile ones 10, attached by pairs to the inner petals; the filaments dilated and membranous towards the base, with the connective prolonged and filiform, bearing at its base a single imperfect cell of an anther. *Anthers* small, round, bilocular, yellow. *Ovarium* turbinate, hispid, 1-celled, with numerous ovula attached to 3 pair of prominent placentæ. *Style* filiform, hairy, attenuated and smooth towards the top. *Stigma* undivided.

This pretty species of *Loasa*, was introduced last year, from seeds collected in Chile, by Mr. Hugh Cuming; and our drawing was taken from a specimen, communicated by Sir George Staunton, Bart., in whose collection, at Leigh Park, Hants, the plant blossomed in June last. We do not find it recorded in any work, nor does it appear to be included among the new species described by Dr. Hooker, and Mr. Arnott, in the Botanical Miscellany.

The plant is annual, and is increased by seeds. It is of easy culture, and will be found to thrive luxuriantly in the open border, during the Summer, continuing to send forth its showy blossoms for several months in succession.

The name was altered by Linnæus, from *Loosa*, an appellation of no meaning, applied to the genus, by Adanson. *D. Don Mss.*



1 Calyx. 2. Outer Petal. 3. Inner Petal. 4. Two of the sterile Stamens. 5. Style.



Impatiens glandulifera (L.) Benth.

1875. 10.

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NIEREMBÉRGIA phœnicea.

Purple Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANÆÆ. *Brown prodr.* 1. p. 443.

NIEREMBERGIA. Suprà fol. 172. series 2.

Sect. 2. Corollæ faucē dilatatā sæpiùs ventricosā, staminibus inæqualibus tubo medio insertis subinclusis, stigmate subcupitato. Petunia.

N. phœnicea, foliis ovatis, laciniis calycinis lineari-spathulatis, corollæ faucē campanulatā tubo triplò longiori, caule ramoso diffuso. *D. Don*
Ms.

Salpiglossis integrifolia. *Hook. in bot. mag.* t. 3113.

The whole herb of rather a lively green, clothed with soft, jointed, spreading hairs, each of which is terminated by a small gland. *Root* fibrous, apparently annual. *Stems* round, branched, spreading, from a foot to three feet high. *Leaves* alternate, ovate, somewhat acute, and slightly mucronulate, quite entire, soft to the touch, narrowed at the base, marked underneath with several pair of curved ribs, and above with depressed lines; about two inches long; lower ones on a short footstalk; uppermost sessile, and occasionally opposite. *Flowers* large, showy, more resembling those of a *Convolvulus*, than a plant of this family; solitary, stalked, drooping, not axillary, but arising from the side of the branches, and oftentimes seated opposite the leaves. *Peduncles* filiform, villous, clothed with soft hairs, an inch and a half to two inches long. *Calyx* deeply parted into five strap-shaped, or spathulate, leafy, obsoletely mucronulate, unequal, spreading, rather recurved segments; two outer ones larger; the tube very short, turbinate, with 10 ribs. *Corolla* of a bright purple, thrice longer than the calyx, slightly marked with five angles; throat dilated, campanulate, nerved, and reticulately veined, about thrice longer than the tube; the limb large, spreading, plaited, about an inch and a half across, with five rounded, obsoletely mucronulate lobes. *Stamens* 5, unequal, inclosed, inserted in the mouth

of the tube ; two upper ones rather longer. *Filaments* compressed, smooth, purple, with their bases closely attached to the tube of the corolla ; the fifth the shortest, and placed between the longer pair of stamens, occasionally sterile, and sometimes even dilated and petaliform. *Anthers* dark purple, bilocular ; the cells distinct, divergent at the base, attached at the middle by means of a narrow connectivum. *Pollen* violet. *Pistil* shorter than the stamens. *Ovarium* ovate, bilocular, furnished at the base with two elevated yellow glands, arising from the shallow disk. *Style* compressed, smooth, with four obsolete angles, becoming broader towards the top. *Stigma* somewhat capitate, with two very short, spreading, viscid lobes, separated by a shallow furrow.

Few plants of this family surpass the one now before us in the beauty and brilliancy of its blossoms, rendering it one of the most valuable acquisitions that has been made to our collections of late years. The flowers are so like those of a *Convolvulus*, that, at first sight, one would be apt to take it for a species of that genus.

It is a native of the countries of the Rio de la Plata, but is found to succeed uncommonly well in the open border in this country, where it will continue to blossom from April to November, if the weather is mild. Treated as a greenhouse plant, it will endure for several years, as we have had already occasion to remark of many other annual species of this family. It is readily increased both by seeds and cuttings : but young plants raised by the former mode are to be preferred, the blossoms in them being in general much larger as in our specimen, which was derived from a seedling plant communicated by Mr. Neill to Mr. Lambert, and which flowered at Boyton last month.

Our thanks are due to Messrs. Young, of the Epsom Nursery, for the opportunity of examining a magnificent plant of this species.

I have already, at *fol.* 172, entered fully into the reasons which have led me to unite *Nierembergia* and *Petunia* ; and every subsequent examination has tended to confirm the accuracy of the views there expressed. *D. Don Mss.*



1. Tube of the Corolla laid open, to show the insertion of the stamens. 2. Pistil—





1. D. with del

not by *Delavay* not L. 22

CRÖCUS lacteus.

Cream-coloured Crocus.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

CROCUS. *Suprà fol.* 98. series 2.

* Sect. I. VERNALES.

† Sub-sect. II. Depilati. *Corollæ fauce depilatâ.*

C. lacteus; floribus unibracteis e sulphureo-albicantibus basi laciniarum (præcipuè intus) stigmatibusque pallidè flavicantibus, filamentis incurvato-patentibus puberulis superne geniculatis; antheris flavissimis. *Nob. in Mss. per multos annos.*

Crocus lacteus. *Sabine in hort. trans. v. 7. p. 432, &c. cum iconè.*

Crocus lagenæflorus. β . *Salisb. parad. lond. t. 106.*

Crocus mæsiacus. β . *Gawler in bot. magaz. t. 1001. (synonymis confusis.)*

Crocus lagenæflorus. β . *Nob. in hort. trans. v. 1. p. 134.*

Crocus albus major alter, dictus mæsiacus. *Park parad. p. 161. tab. 163. fig. 2.*

Crocus vernus minor albicans. *Mill. dict. ed. 6; nec Bauh.*

Crocus vernus var. 11. *Narrow-leaved Spring Crocus, with a small white flower. Mill. dict. ed. 7. Ed. 8. No. 12.*

Crocus vernus mæsiacus, flore albo. *Theatr. fl. t. 39.*

Crocus vernus latifolius pallidus. *Bauh. pin. p. 66. No. 3.*

Crocus mæsiacus. *Ker irid. p. 76. exclus. synonym. Willd.*

Crocus mæsiacus. *Hort. kew. ed. 2. p. 81. (synonymis confusis.)*

β . *Gracilior, laciniiis minùs imbricatis albis; interioribus basin versus ad costam flavicantibus, exterioribus a basi ferè ad medium tubo-que lætissimè prasino-cæruleove-striatulis; filamentis minùs pubescentibus. Nob. in Mss.*

Crocus lacteus, var penicillatus. *Sabine in hort. trans. v. 7. p. 447, &c. cum iconè.*

Crocus lagenæflorus. α . *Salisb. par. lond. t. 106.*

Crocus lagenæflorus. γ . *Nob. in hort. trans. v. 1. p. 134.*

Crocus vernus, flore albo purpureo-violaceo basi. *Mill. dict. ed. 6?*

Crocus albus mæsiacus, fundo violaceo. *Park. parad. p. 161.*

Crocus vernus latifolius, pallido flore, viridibus venulis, &c. *Rati. hist. 1175.*

The above is a copious synonymy of the *Crocus lacteus*, which we so designated in the year 1810, having the year before published it in the first Volume of the Horticultural Society's Transactions as variety β , of *Crocus lagenæflorus* of Salisbury, from having only seen two withering flowers of

it ; but supposing, at the time, it would ultimately prove to be a distinct species. In the Seventh Volume of the Horticultural Transactions, Mr. Sabine adopted that name, and gave a figure of the plant in a magnificent and beautiful group of other species and varieties of *Crocus*, cultivated in the Garden of the Horticultural Society at Chiswick.

Few plants have had their history more confused than the present. It is the *Crocus luteus* of Rømer and Shultes's *Systema Vegetab.* v. 1. p. 368, but blended with at least two other species, which it would require more than our limited space will admit to clear up. Indeed, our plant has not been well understood by any authors we have consulted, except Salisbury and Sabine ; who have also described its present beautiful variety β .

These plants are natives of Mœsia, a country of Turkey in Europe, and have been cultivated in England ever since the days of Parkinson ; but at present they are very rare in our collections, flowering rather after the middle season of the Spring Crocuses, and by far less freely than most of them ; the pencilled variety being still later than the cream-coloured kind. They prefer a light soil, and open situation in the Garden ; requiring to be taken up, and transplanted once in three years, singly, at about two inches apart, and rather more in depth ; after which, in the following Spring, their soft-hued, and remarkably pencilled flowers, will make a good appearance, if planted in patches, of a score roots or more, intermingled with other vernal plants. A. H. H.



1. The Stamens. 2. The Style. 3. The same magnified.

ERRATUM.—On the opposite side of page 191, line 4, after the word that, add, is.



Malva

Malva sylvestris

LOASA nitida.*Glossy-leaved Loasa.*

Linnean Class and Order. POLYANDRIA MONOGYNIA.
Natural Order. LOASEÆ. *Juss. in ann. mus. 5. p. 21.*
LOASA. *Suprà fol. 192. series 2.*

- L.** *nitida*, hispida; foliis oppositis cordato-oblongis sinuato-lobatis dentatis, lacinii calycinis elongatis, petalis saccatis: appendicibus exteriorum lanceolatis acuminatis medio aristatis. *D. Don Mus.*
L. *Loasa nitida.* *Lam. dict. 3. p. 581. Willd. sp. pl. 2. p. 1177. Juss. in l. c. 5. p. 25. t. 2. f. 2. Persoon syn. 2. p. 71. Bot. mag. t. 2372. Hook. exot. fl. 1. t. 83. Hook. et Arnott in bot. misc. 3. p. 328.*
L. *tricolor.* *Ker in bot. reg. t. 667.*
L. *acanthifolia.* *EjUSD. t. 785?*
L. *Placsi.* *Lindl. in hort. trans. 6. p. 95?*

Root annual. *Stems* much branched and spreading, which, as well as the rest of the plant, are copiously clothed with long, straight, stimulating bristles, intermixed with short hairs. *Leaves* opposite, cordate, oblong, more or less deeply lobed and toothed, from 3 to 6 inches long; lower ones stalked; upper ones sessile, slightly embracing the stem. *Flowers* solitary, axillary or terminal, drooping. *Peduncles* filiform, bristly, an inch to an inch and a half long. *Calycine segments* linear-lanceolate, attenuated, spreading. *Outer 5 petals* rather longer than the calyx, of an orange yellow, hollow, saccate, bristly, with a narrow channelled claw; the inner ones short, white, marked with a crimson spot at the middle, cucullate, bifid, dilated towards the base, the edges involute. *Appendages* lanceolate, acuminate, white, with a large crimson blotch, furnished on the outer edge, about the middle, with a long, slender, capillary bristle. *Sterile stamens* white, dilated and fringed at the base, prolonged into a bristle at the apex. *Anthers* yellow. *Ovarium* 5-celled, crowned by a tuft of bristly hairs. *Style* awl-shaped, hairy at the base. *Stigma* undivided, obtuse.

A hardy annual, native of Chile, whence it was introduced to our gardens about ten years ago. It is a variable plant, differing much in the size and form of its leaves ; but the shape of the appendages, and elongated segments of the calyx, remain permanent throughout, so that we are inclined to think even *Loasa Placei* will prove only another form of this species.

Our drawing was taken from a specimen communicated by Sir George Staunton, Bart., having been raised from seeds received from Mr. Hugh Cuming.

Planted in a poor soil, it blossoms abundantly ; but in a rich one, it becomes luxuriant, and unsightly.

The generic name is already explained in the last Number. *D. Don Mss.*



1. Calyx. 2. Outer Petal. 3. Stamens. 4. Pistil. 5. Inner Petal, with its appendages. 6. Sterile Stamens.





Pub by J. H. R. 1883.

NICOTIANA longiflora.

Long-flowered Tobacco.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANEE. *Brown prodr.* 1. p. 443.

NICOTIANA. *Suprà fol.* 107. *series* 1.

- *longiflora*, scabra; foliis caulinis amplexicaulibus cordato-lanceolatis acuminatis, corollæ tubo filiformi calyce subfoliaceo 5-plò longiori: lobis ovato-lanceolatis acutis. *D. Don Mus.*
Nicotiana longiflora. *Cavan. deccr.* p. 106. *Ram. et Schult. syst. veg.* 4. p. 322.

Root annual. *Stem* erect, much branched and spreading, like the other parts of the plant, copiously clothed with glandiferous hairs, and rough, with short bristles, callous at the base. *Branches* long, twiggy, filiform, rough. *Leaves*, the radical ones ovate-lanceolate, acute, waved, narrowed at the base, scarcely stalked, about a span long, and 3 inches broad; those of the stem sessile, lanceolate, acuminate, wavy, and repand at the margin, scabrous above, about three inches long, with a broad and cordate base; the upper ones narrow, and almost linear. *Flowers* lateral, solitary, stalked, ascending, frequently placed opposite the leaves. *Peduncles* stout, round, hairy, from half an inch to an inch long. *Calyx* an inch in length, with the tube rather centricose, and marked with 5 angles; the limb divided into 5, lanceolate-linear, obtuse, erect, unequal segments, rather longer than the tube, and furnished with a prominent midrib. *Corolla* of a dingy white, afterwards tinged with purple; the filiform, straight, densely pubescent, 4 or 5 inches long, with the mouth but little widened; the limb spreading, deeply five-lobed, plaited, above of a clear white, underneath greenish, afterwards becoming of a dingy purple; lobes ovate-lanceolate, acute, at first involute at the edges. *Stamens* 5, unequal, inserted in the mouth of the corolla. *Fila-*

ments slender, cylindrical, very short, and smooth. *Anthers* two-celled, of a deep violet colour; the cells united along the middle by means of the connectivum, but free at both extremities. *Pollen* sulphur-coloured. *Ovarium* oblong, 2-celled, surrounded at the base by a fleshy, repandly-crenate, orange ring. *Style* filiform, smooth. *Stigma* projecting beyond the mouth of the corolla, peltate, composed of 2 very short, spreading, viscid lobes.

This curious species of Tobacco forms another interesting addition to the flower-border, its long, slender blossoms being produced in great abundance, and for several months in succession. The singular phenomenon, common to many white and dingy flowers, of expanding only at night, or in cloudy weather, occurs, also, in this plant. Like *Nierembergia phœnicea*, it is a native of Buenos Ayres, where it was discovered by Mr. Tweedie; and from seeds received from that enterprising collector, the plant was raised by my worthy friend, Mr. Neill, in whose garden, at Canonmills, near Edinburgh, I had the pleasure of seeing it, for the first time, in full blossom, in September last. It forms one of the aberrant species of *Nicotiana*, coming near to *Nierembergia*, which is principally distinguished by the greater degree of development in the segments of the calyx.

Cavanilles states his *N. longiflora* to have been collected in Chile, by M. Née; and, although his description is rather meagre, it, nevertheless, accords so well with our plant, that I have no doubt of their identity.

The plant is a half-hardy annual, thriving best in light rich soil, and is increased by seeds.

Our drawing was taken from a plant that had been received by Mr. Lambert from Mr. Neill, and which flowered at Boyton last month.

The generic name is from Jean Nicot, Envoy from the Court of France to Portugal, whence he brought the plant in 1560. *D. Don Mss.*



1. Corolla laid open, to show the insertion of the Stamina. 2. Pistil.





1898. 101

Pub by J. H. Rogers Aug 1893

W. H. H. H.

SCHIZANTHUS retusus.

Blunt-lipped Schizanthus.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SOLANEEÆ!

SCHIZANTHUS. *Calyx* 5-partitus, subæqualis. *Corolla* limbo 4-
partita, lobata, irregularis, amorphæ, æstivatione plicatâ : tubo angusto,
breviato. *Stamina* 4: 2 superiora sterilia, filamentis omnino adnatis.
Anthera basi insertæ, biloculares : *loculis* apice confluentibus. *Ovarium*
loculare disco carnosæ lævi impositum. *Stigma* compressum, obtusum,
bis connatis. *Capula* bilocularis, polysperma : *valvulis* bifidis. *Dissepimentum* parallelum. *Placentæ* 2, fungosæ. *Semina* simplici gyro coch-
leata : *testâ* crustaceâ, tuberculatâ : *albumen* carnosum. *Embryo* arcuatus :
radiculâ cylindraceâ, obtusâ, cotyledonibus duplè longiori.

Herbæ (Chilenses) annuæ, glandulosæ. Folia bipinnatifida. Flores
racemosi, colore variegati.

Obs. Genus Solaneis certè adnumerandum, et nullo modo cum Calceo-
riâ associatum, ut plerique perhibent botanici. Salpiglossidi, ut videtur,
sine capsulæ et seminis fabricâ, embryo arcuato, pubescentiâ glandu-
losâ capitatâ, flore subsimiliter colorato et variegato. *D. Don Mus.*

retusus, pedunculis fructiferis strictis, corollæ tubo calyce longiori ; labii
inferioris laciniis lateralibus intermediâ sagittatâ brevioribus ; supremâ
rhombeo-oblongâ retusâ.

Schizanthus retusus. *Hook. in bot. mag. t. 3045. Lindl. in bot. reg. t. 1544.*

The whole herb of a lively green, somewhat glossy, and more sparingly
clothed with glandular hairs. *Root* fibrous, annual. *Stem* upright, branched,
from 3 to 4 feet high, rarely exceeding the thickness of a goose quill.
Branches erect, and rather converging. *Leaves* stalked, deeply and inter-
ruptedly pinnatifid, almost pinnate, from 3 to 7 inches long, and much like
those of the common tansy ; the segments are lanceolate, rather blunt ; the
primary ones inciso-pinnatifid, with an oblique, attenuated, almost stipitate
base ; but when they are entirely sessile they are furnished with one or two
leafy appendages ; secondary, or alternate ones shorter, lanceolate, and
quite entire ; the terminal one pinnatifid, with entire segments. *Rachis*
narrow, convex below, flat, and channelled above. *Footstalk* with a broad,
concave, adpressed base. *Flowers* large and showy, disposed in loose race-
mes, terminating the branches. *Peduncles* upright, filiform, an inch long,
thickened at the top, and together with the calyx thickly clothed with
white spreading hairs, crowned by a dark spherical gland. *Bractes* mostly
in pairs, small, unequal, rounded-ovate, entire. *Calyx* deeply parted into
strap-shaped, blunt, erect, connivent, nearly equal segments ; the 2
innermost ones rather smaller. *Corolla* irregular, slightly clothed with
glandular hairs ; the tube cylindrical, longer than the calyx, and of a pale
violet ; limb spreading, deeply parted into 4 segments ; the lateral ones
broad and flat, of a rich uniform purple lake, doubly two-lobed, the lobes
very blunt, unequal and divaricated, lower lip tripartite, of a deep reddish
purple ; the lateral segments linear, obtuse, straight, shorter than the inter-

mediate one, which is obversely sagittate, conduplicate, hollow, with acuminate lobes; upper lip large, erect, an inch long, of an oblong rhomboid form, with a rather narrow, abruptly obtuse, occasionally emarginate apex; of an orange yellow; marked with oblong, linear, dark brown spots, veiny beneath, the edges revolute, with a cucullate base. *Stamens* 4; the two upper ones sterile, with the filaments attached to the corolla along their whole length; lower pair fertile, with the filaments free, flat, and ciliated at the margin. *Anthers* 2-celled, erect, inserted by their base; the cells confluent at the top, their bases slightly divergent, opening lengthways. *Ovary* ovate, bilocular, inserted on a smooth fleshy disk. *Style* linear, compressed, truncate at the edges. *Stigma* but little broader, compressed, obtuse; lobes connate, apex with a shallow furrow, often furnished with a drop of viscid juice. *Capsule* oblong, 2-celled, hardly shorter than the calyx, with concave, bifid, cartilaginous valves. *Dissepiment* with the flat side towards the axis of the raceme. *Placentæ* 2, fungous, pitted, attached to the partition. *Seeds* reniform, furrowed, and covered with small tubercles, disposed in lines; the testa crustaceous. *Albumen* fleshy, white. *Embryo* curved, white. *Cotyledons* oblong, plano-convex. *Radicle* cylindrical, obtuse, twice the length of the cotyledons.

For the introduction of this very showy annual we are indebted to Dr. Gillies, by whom it was discovered on the Chilian Andes; and from seeds, communicated by him to the late Mr. Barclay, the plant was first raised in the garden at Bury-Hill, in 1831. It is now not uncommon in collections; and, as it ripens its seeds freely, and is of easy culture, we hope, ere long, to see it more generally cultivated, as the beauty of its blossoms cannot fail to render it an universal favourite. Its characters appear to continue unchanged from seed; but whether the plant is to be considered as more than a variety of *S. Grahamii*, I confess I feel incompetent to decide, from the want of sufficient knowledge of the limits prescribed to species in this genus. The tube of the corolla is represented, by Dr. Hooker as only equalling the calyx in length, but in all my specimens it was decidedly longer.

The genus has been noticed by many authors, and all agree in referring it to the *Scrophularinæ*, and in comparing it with *Calceolaria*, with which it appears to have but little affinity. From noticing the similarity of the pubescence, and the variety and arrangement of the colours in the flower, I was first led to compare the genus with *Salpiglossis*; and although the comparison may appear to many paradoxical, I feel confident that those who choose to direct their attention to the subject, will be disposed to admit the accuracy of the view I have taken of its affinities; for except the deeper divided calyx, and more irregular corolla, *Schizanthus* does not differ in any essential point from *Salpiglossis*.

Our drawing was taken from a plant that blossomed last month in the Nursery of Messrs. Allen and Rogers, at Battersea. A light fresh earth, not too rich, will be found to suit it best; and if the plants are to be kept in the Greenhouse, a free admission of air and light is absolutely necessary to preserve them in health and vigour, and to give the flowers their proper tints of colour.

I would wish to direct the attention of some of my readers to the peculiar acid secretion given out by the glandular hairs on the various species of this genus, a fact first pointed out to me by Miss Murray, a young lady of eminent botanical taste and knowledge.

The generic name, which alludes to the lacinated corolla, is compounded of $\sigma\chi\iota\zeta\omega$, to cut, and $\alpha\theta\omicron\varsigma$, a flower. *D. Don.*



1. Calyx and Pistil. 2. Corolla, with the Stamens. 3. Capsule. 4. Seed.





Herb. 111

drawn by Th. G. W. G. Aug 1823

AGROSTÉMMA pyrenaica.

Pyrenean Rose-Campion.

Linnean Class and Order. DECANDRIA PENTAGYNIA.

Natural Order. CARYOPHYLLÆ. *Juss. gen. p.* 299.

AGROSTEMMA. Calyx tubulosus, 5-dentatus. Petala 5, unguiculata, sæpiùs appendiculata. Styli 5. Capsula 1-locularis, apice 5-valvis. Torus abbreviatus.

Herbæ (plerumque perennes et europææ.) Flores terminales, solitarii v. corymbosi, albi aut rubri.

A. pyrenaica, glabra; foliis radicalibus spathulatis; caulinis sessilibus cordatis, paniculâ pauciflorâ, calycibus clavatis inflatis basi intrusis, petalis emarginatis.

Agrostemma pyrenaica. *G. Don syst. gard. and bot.* 1. p. 416.

Lychnis pyrenaica. *Berger. fl. bass. pyren.* 2. p. 264. *Dec. fl. fr.* 5. p. 608. *Prodr.* 1. p. 387.

L. nummularia. *Lapeyr. abr.* p. 263.

Plant small, perennial, very smooth, glaucous and pruinose, occasionally changing to a purple hue. *Stems* many, branched, ascending, 3 inches high, doubly forked; joints rather callous, with the interstices filiform. *Leaves* quite smooth and glaucous, entire, mostly concave, rather thick and coriaceous; radical ones spathulate, stalked, about an inch long; those of the stem scarcely half the length, decussate, sessile, cordate, terminated by a minute purple point; the bases connivent, and almost connate. *Bractes* ovate-oblong, concave, mucronulate, connate at the base, and generally adpressed. *Panicle* forked, of from 3, 5, to 7 flowers. *Peduncles* slender, filiform, smooth, an inch long. *Calyx* clavate, rather inflated, membranous, 5-toothed, with 10 nearly obsolete angles; the base inverted: teeth very short, broadly ovate, slightly mucronulate, with a thin membranous white or purplish border. *Petals*, the lamina wedge-shaped, notched, of a pale rose colour, equal in length to the calyx; the claws about half the length of the lamina, also wedge-shaped, slightly contracted at the base, of a pale green, the border thin, the disk furnished with two elevated, obtuse, parallel ridges, which gradually disappear in the lamina. *Coronary appendages* bipartate, with lanceolate, acute, erect segments, occasionally toothed at the margin. *Stamens* 10; the alternate ones, which are opposite the petals, rather shorter. *Filaments* awl-shaped, smooth, white, thickened at the base and united into a short column, denominated the anthophorum, about equal in length to the ovarium. *Anthers* of a very pale purple, with linear, paral-

lel cells, opening lengthways, and sometimes divergent at the base. *Ovarium* oblong, marked with 5 furrows. *Stigmas* 5, semi-cylindrical, recurved at the top, papillose along the inner surface. *Capsule* rounded, ovate, one-celled. *Placenta* central, free, fungous, oblong, tuberculated. *Seeds* nearly orbicular, quite smooth, attached to the placenta by an elongated process.

This pretty little plant is extremely local in its native country, being limited to one spot only on the western Pyrenees, as we are informed by our friend, Dr. Macreight; who, together with his accomplished lady, has surveyed the botanical treasures of that interesting mountain-range. It was first described by M. Bergeret, in his "Flore des Pyrénées," but we believe no figure has yet been published of it. It is a hardy perennial, is increased by seeds or by slips, and is admirably suited for a rock-work; but the preferable mode is to keep the plants in pots, and under the protection of a pit or frame in Winter. They should be planted in a mixture of sandy loam and peat, and in small-sized pots, as they are apt to suffer from damp.

The greater or less degree of cohesion between the sepals, the number of styles, and the absence or presence of partitions in the capsule, (characters, which, in less natural families, would be reckoned of comparative little value,) afford almost the only tangible ones among the *Coryophylleæ*; and although the genera, thus constructed, may appear extremely artificial, yet it is necessary to adhere to some general rule, and I have, therefore, considered *Agrostemma* and *Lychnis* as constituting two distinct genera; for unless we are prepared to unite the whole of the *Sileneæ* into one, these two, in my opinion, are entitled to be kept apart. In *Viscaria* and *alpina*, which may be reckoned the typical species of *Lychnis*, the ovarium is constantly 5-celled, and the same is also the case in *dioica*, which forms the type of the aberrant group of the genus. The *Chalcedonica*, *fulgens*, and some others, having an unilocular ovarium, are really species of *Agrostemma*, with the normal ones of which their habit entirely accords. To the latter genus belongs also *Lychnis flos cuculi*.

Drawn at the Chelsea Botanic Garden, in June last.

The generic name is derived from *αγρος*, a field, and *στεμμα*, a crown, the same as the Latin name *Coronaria*, literally meaning rustic crown, from the flowers of some species of this genus having formed part of the rustic garland among the ancient Greeks. *D. Don.*



1. Radical leaf. 2. Stamens and Pistil. 3. Petal. 4. Capsule. 5. Seed.



Indigofera tinctoria L.

Bot. an.

LUPINUS mutabilis; var. Cruckshanksii.*Mr. Cruckshanks' Lupine.**Linnean Class and Order.* DIADELPHIA DECANDRIA.*Natural Order.* LEGUMINOSÆ. *Juss. gen.* p. 345.*LUPINUS.* *Suprà fol.* 12.

L. mutabilis, sub-arborescens, glaberrimus; foliolis 5-9 oblongo-spathulatis mucronulatis, floribus verticillatis, calycis labio superiore bifido; inferiore acuto integro.

Lupinus mutabilis. *Suprà fol.* 130. *series* 1. *G. Don syst. gard. and bot.* 2. p. 368.

β. *Cruckshanksii*, floribus cœruleis.

Lupinus Cruckshanksii. *Hook. in bot. mag.* t. 3053.

L. mutabilis. *Lindl. in bot. reg.* t. 1539.

Plant biennial, of an arborescent aspect, perfectly smooth and glabrous, of a pale glaucous green, often rising to the height of 5 or 6 feet, much branched. *Stem* and *branches* round and fistulous. *Leaves* composed of from 5 to 9 leaflets, disposed in a circle, oblong-spathulate, mucronulate, soft and fleshy to the touch, 2 inches long, the edges callous, and folded at the base. *Footstalks* 3 or 4 inches long, smooth, round, and attenuated, the base thickened and flattened above. *Stipules* awl-shaped, minutely fringed, adnate. *Racemes* alary, on a long cylindrical stalk. *Flowers* large and showy, disposed in nearly equidistant whorls of from 5 to 7 flowers. *Pedicels* rather longer than the calyx, smooth and cylindrical. *Bractes* awl-shaped, slightly fringed and caducous, with a rather broad concave base. *Calyx* minutely pubescent, lips equal, the upper one deeply notched, lower one ovate-oblong, concave, pointed, slightly keeled below, furnished at the sinus with two minute pointed partial bractes. *Verillum* with an orange disk, the lower sides blue, upper half purple. *Wings* blue. *Keel* pale purple, pointed. *Anthers* orange, five round on longer filaments. *Ovarium*

silky. *Style* filiform, attenuated upwards. *Stigma* a small bearded disk.

Differing in no respect, except in colour, from that already figured at Tab. 130 of the first series of this work. From the predominance of blue in the flowers of this genus, we are disposed to regard the present very showy variety as the type of the species. It was discovered by Mr. Cruckshanks, not far from Pasco, on the Peruvian Andes, near the limit of perpetual snow; and the plant was named in compliment to that gentleman by Dr. Hooker, who then considered it as distinct from *L. mutabilis*.

The plant is only biennial, but assumes an arborescent habit, and, if kept in the Conservatory, will continue to flourish for several years.

It is increased by seeds, but the variety is not permanent.

Our drawing was taken at the Nursery of Mr. Little, King's Road, Chelsea.

For the explanation of the generic name, see fol. 12. *D. Don.*



1. Calyx. 2. Keel. 3. Stamens. 4. Pistil.





... August 13th

Hand-drawn

TROPÆOLUM Majus; var. atrosanguineum.

Dark-red Indian Cress.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. TROPÆOLEÆ. *Juss. in mem. mus.* 3. p. 447.

TROPÆOLUM. *Suprà fol.* 134.

T. majus, foliis subrotundis peltatis integris, petalis subæqualibus; 3 inferioribus unguiculatis orbiculatis pectinato-fimbriatis, calcare recto subulato calyce longiori.

Tropæolum majus. *Linn. sp. pl.* p. 490. *Hort. ups.* p. 93. *Mat. med.* p. 101. *Mill. dict. n.* 2. *Curt. bot. mag. t.* 23. *Willd. sp. pl.* 2. p. 298. *Dec. prodr.* 1. p. 683. *G. Don. syst. gard. and bot.* 1. p. 746.

T. foliis peltatis orbiculatis. *Linn. hort. cliff.* p. 143.

Cardamindum ampliori folio et majori flore. *Tournef. Feuille. peruv.* 3. p. 14. t. 8.

C. majus s. Acriviola flore simplici aureo. *Knorr del. t. R.* 18.

Acriviola maxima odorata. *Boerh. lugdb.* 1. p. 244.

Viola inodora, scandens; nasturtii sapore, maxima odorata. *Herm. lugdb.* 628. t. 629.

β. atrosanguineum, floribus atrosanguineis.

Root fibrous, annual. *Stem* round, procumbent, branched, slightly angular towards the top, generally about a foot high. *Leaves* on long footstalks, round, peltate, with 7 broad even angles, peltately nerved, copiously furnished on both sides with papillose hairs, especially the young ones, the upper surface becoming quite smooth, varying from an inch and a half to 3 inches in breadth; the angles truncate, slightly emarginate, or furnished with a very short cartilagineous point. *Footstalks* from 2 to 6 inches long, cylindrical, smooth, flexuose, slightly attenuated towards the top. *Peduncles* longer than the leaves, cylindrical, thickening downwards. *Flowers* large, of a very dark red, and of a rich velvety hue. *Calyx* orange, somewhat bilabiate, with 5 ovate, oblong, rather acute lobes, marked inside with several dark-red lines, 2 lower ones narrower, and more deeply divided; the anterior and posterior ones over-lapping the others in æstivation. *Spur* an inch long, subulate, straight, gently widening upwards. *Petals* 5, nearly equal; 3 lower ones

with semicylindrical channelled claws, and a broad flat lamina, fringed at the base with many linear pointed segments; 2 upper ones sessile, naked, rather obovate, an inch and a half long, the claws connate calyx. *Stamens* 8, hypogynous, unequal, declinate. roundish, smooth, marked with dark-red lines. *And* low, oblong, obtuse, tetragonal, 2-celled; the valves lute at the edges. *Pollen* deep yellow. *Ovaria* 3 together, with 5 stout prominent ribs. *Style* obtusely with a trifid apex; the lobes subulate, diverging. truncate glanduliform dot.

Perhaps, of all plants cultivated for a long series the common *Nasturtium* is the most striking example can be adduced of the power possessed, by certain of resisting the influences of soil and climate, and continuing unchanged their characters, even to the colour of flowers, the present being almost the only variation remarked of that common plant. Its large dark-red of a velvety hue, render it a most desirable acquisition to the flower border. It is usually more dwarf than the common kind, and, like it, will thrive in almost any soil, and readily increased by cuttings; but we have little doubt of the immutable nature of the parent being descended to its aberrant progeny, and that it will be continued from seed.

Drawn at the Nursery of Messrs. Allen and Sons, Battersea.

The generic name will be found explained in the last volume. *D. Don.*



1. Stamens 2. Pistil. 3. Fruit.



ALSTRÆMERIA aurantiaca.*Orange-flowered Alstræmeria.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* AMARYLLIDÆ. *Brown prodr.* 1, p. 296.*ALSTRÆMERIA.* *Suprà fol.* 228. series 1.

A. aurantiaca, erecta; foliis lanceolatis obtusis glabris obsolete denticulatis, perianthii foliolis integerrimis; interioribus lanceolatis acuminatis erectis.

Herb glaucous. *Stem* erect, from 1 to 3 feet high, round, or slightly angular, flexuose, copiously besprinkled, as well as the upper surface of the leaves, with minute crystalline bodies. *Leaves* scattered, lanceolate, obtuse, from 2 to 3 inches long, half-an-inch or rather more in breadth; narrowed at the base into a rather long footstalk; the edges cartilaginous and very finely denticulate, furnished above with several prominent nerves; the under surface quite smooth and even, reversed by the twisting of the footstalk. *Flowers* several, terminal, cymose, orange. *Peduncles* angular. *Perianthium*, the 3 outer leaves spatulate, even, recurved and spreading, an inch and a half to 2 inches long, furnished at the top with a short callous point; the ribs externally green; three inner ones lanceolate, acuminate, narrower, and nearly erect, slightly waved and curled at the upper edge, marked along the middle with two elevated lines; the upper ones marked with several linear dark red spots; lower ones smaller, of a uniform colour, but sometimes, although rarely, furnished with two spots. *Claws* narrow, linear, keeled, channelled within, half-an-inch long, rigid, distant at the base, the edges folded, thickened and minutely papillose. *Stamens* 6, unequal, hardly longer than the perianthium, at first declinate, but becoming more erect after impregnation. *Filaments* long, awlshaped, smooth. *Ovarium* turbinate, 6-sided, with elevated, compressed, acute angles. *Style* 3-sided, about half the length of the stamens only, with a

trifid apex. *Stigmas* 3, obtuse, minutely papillose. *Capsule* rounded, 3-celled. *Seeds* many, flat, nearly orbicular, arranged in double rows.

We fear this very showy plant is scarcely entitled to be regarded in any other light than as a mere variety of *A. Simsii*, given at tab. 267 of the first series of this work, and from which, besides colour, it is chiefly distinguished by its perfectly glabrous leaves, by the lanceolate and more pointed inner foliola of the perianthium, and by their longer and narrower claws ; but the erect species of this genus are found to vary so exceedingly, that we are sceptical of any definition that can be given of them.

Introduced from Chile, by Mr. Anderson, the indefatigable collector, who accompanied Captain King in his voyage of survey in South America.

The plant requires the same treatment as *A. Simsii*, and appears to be quite as hardy as that species. Our drawing was taken at the Clapton Nursery, in June last.

The leaves in this genus are, by the twisting of the petiole, resupinate ; the upper surface, which, in other plants, is usually smooth, even, and destitute, both of ribs and stomata, having the peculiar structure, and performing the functions of the under surface. The discovery of this curious economy in the leaves of *Alstræmeria* is due to Mr. Brown, who first pointed it out some years ago.

The generic name is already explained at fol. 228 of the first series. *D. Don.*



1. Stamens. 2. Ovarium.



1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

COLLOMIA lateritia.

Red-flowered Collomia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. POLEMONIACEÆ. *Vent. tabl. 2. p. 398.*

COLLOMIA. *Calyx* 5-fidus. *Corolla* hypocrateriformis, limbo 5-partita. *Stamina* corollæ tubo inserta. *Ovarium* 3-loculare: *ovulis* solitariis. *Capsula* 3-locularis, 3-valvis: *loculis* monospermis. *Semina* angulata.

Herbæ (Americane) annuæ, glanduloso-pubescentes. *Folia* sparsa, indivisa. *Flores* terminales, congesti, bracteati, rubri.

C. lateritia, laciniis calycinis lanceolatis acuminatis, corollæ tubo calyce vix longiori, staminibus inclusis.

Root annual, fibrous. *Stem* about a span high, erect, branched or simple, cylindrical, clothed like the other parts of the plant with glandular, clammy pubescence. *Leaves* alternate, sessile, lanceolate, acuminate, entire, or deeply and sharply toothed, especially the lower ones. *Flowers* crowded at the extremities of the branches, fasciculate. *Bractes* linear-lanceolate, acuminate. *Calyx* cleft to the middle into 5 lanceolate, acuminate, connivent, and nearly equal segments; the tube turbinate and pentagonal. *Tube of the corolla* narrow, 5-sided, yellow, scarcely equalling the calyx in length, copiously clothed with glandular pubescence, rather widened at both extremities. *Limb* spreading, 5-partite, segments, oblong-elliptical, obtuse, beneath of a pale salmon colour, above of a deep vermilion tint, traversed by several straight, and almost simple, nearly parallel nerves. *Stamens* 5, included within the tube of the corolla, unequal. *Filaments* very short, awl-shaped, smooth. *Anthers* reniform, bilocular, of a cream colour, opening lengthways; the cells slightly divergent at the base. *Ovarium* rounded, 3-celled, with solitary ovula. *Style* capillary, smooth, attenuated at the base. *Stigmas* 3, linear, obtuse, rather thick, copiously covered with minute papillæ. *Capsule* 3-celled, valves cartilaginous, pro-

minent at the top, resembling 3 lobes. *Seeds* dark-brown, solitary in each cell, convex on the outside, marked with a deep furrow within. *Albumen* copious, cartilaginous. *Embryo* pale yellow. *Cotyledons* oval, longer than the radicle.

Introduced from Chile, by Mr. Hugh Cuming. It is distinguished from the *C. Cavanillesii* of Messrs. Hooker and Arnott, by its much smaller flowers, and by the tube of the corolla scarcely exceeding the calyx in length, while in that species it is nearly twice as long.

It is a hardy annual, of very easy culture, and ripens its seeds freely, which come up spontaneously in the open border.

Our drawing was taken at the Botanic Garden, Chelsea, in July last.

The genus is scarcely distinguishable from *Gilia*, except by the stamens being inserted in the tube of the corolla, and by the monospermous cells of its capsule ; but *Collomia heterophylla*, in which the seeds are occasionally solitary, and rarely ever more than two, would, perhaps, justify their union. *D. Don.*



1. Calyx, with the bractes. 2. Corolla laid open to show the insertion of the stamens. 3. Pistil 4. Capsule.



S. T. Carter del.

Drawn by S. S. Gray 164, Decisively Sept 1883.

VERBENA venosa.*Veiny-leaved Vervain.*

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.
Natural Order. VERBENACEÆ. *Brown prodr.* 1. p. 510.
VERBENA. Suprà fol. 202.

V. venosa, scabra; foliis oblongis mucronatis dentato-serratis, spicis abbreviatis corymboso-paniculatis, corollæ laciniis cuneato-rotundatis dilatatis emarginatis.

Verbena venosa. *Gill. and Hook. in bot. misc.* 1. p. 167. *Hook. in bot. mag.* t. 3127.

Whole herb of an opaque green, harsh and rough, with short simple bristly hairs, intermixed with glanduliferous ones. *Root* perennial, occasionally creeping, and sending forth subterraneous shoots. *Stem* upright, branched, varying from a foot to 2 feet high, stiff, with 4 angles; the two opposite ones alternately channelled. *Leaves* decussately-opposite, sessile, oblong, or linear-oblong, of nearly equal breadth, mucronate, sharply and copiously toothed, especially towards the apex, wrinkled and veiny on both surfaces, scarcely paler beneath, the base broad and slightly decurrent, with a white, flattish mid-rib, from 2 to 5 inches long, and about an inch broad. *Flowers* of a brilliant purple, changing to violet, on fading, in short thick spikes, of about an inch long, disposed in a corymbose panicle. *Bractes* linear-lanceolate; acuminate, channelled, hispid, longer than the calyx. *Calyx* hispid, tubular, 5-sided; the teeth very short, ovate, mucronate, conduplicate, erect, with the interstices membranous. *Corolla*, the tube dark red, thrice longer than the calyx; hairy both within and without; the limb 5-lobed, glabrous, with the lobes equal, broad, round, and anenorm, notched, spreading, veiny. *Stamens* 4, didynamous, inserted about half way down the tube. *Filaments* short, smooth. *Anthers* cordate, mucronulate, yellow,

the cells marginal, attached lengthways to a broad, pointed connectivum. *Ovarium* bilocular, rounded, smooth. *Style* very short, compressed, smooth, attenuated at the base. *Stigma*, a pale, greenish, depressed gland, seated between the produced sides of the style; the posterior lobe elongated and pointed.

This very showy species of *Verbena* is a native of the Pampas of Buenos Ayres, where it was discovered by Dr. Gillies, and from seeds communicated by him to Mr. Neill, plants were raised, which blossomed, for the first time, in the garden at Canonmills, near Edinburgh, in the Summer of 1831.

It is nearly related to *V. bonariensis*, but differs in its much dwarfer size, shorter spikes of larger and redder flowers, with the lobes of the corolla broader and deeply notched. It will be found to grow in almost any soil; is readily increased by slips, and blossoms abundantly in the open border during the Summer months.

Our drawing was taken at Mr. Knight's Nursery, King's Road, Chelsea, in July last.

The generic name is already explained at fol. 295 of the first series. *D. Don.*



1. Bracte. 2. Calyx. 3. Corolla laid open to show the insertion of the Stamens.
4. Pistil.



1



... and ...

PLATYCÖDON grandiflorum.

Great Bell-flower.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.

PLATYCÖDON. *Calyx* 5-fidus. *Corolla* apice 5-loba, maxima, infundibuliformis. *Stamina* 5, inter se libera, filamentis basi latioribus. *Stigmata* 3-5. *Capsula* 3-5-locularis, apice 3-5-valvis medio septiferis dehiscentis: *loculi* (quandò 5 adsunt) lobis calycinis et staminibus alterni *Semina* ovoidea, majora quàm vulgò in ordine, nitida, non angulosa.

Herbæ (ex Asiâ orientali,) *perennes*, sæpè *glaucescentes*; *foliis alternis vel sub-oppositis, sessilibus, magnitudine mediocribus, superne minoribus; floribus paucis terminalibus, solitariis, pedunculatis.* *Alph. Decand. monogr.* p. 125.

P. grandiflorum, glabrum; foliis ovato-lanceolatis acuminatis argutè serratis, capsulâ 5-loculari.

Platycodon grandiflorum. *Alph. Decand. l. c.* p. 125.

Wahlenbergia grandiflora. *Schrad. cat. hort. gætt. ann.* 1814.

Campanula grandiflora. *Jacq. hort. vind.* 3. p. 4. t. 2. *Linn. fil. suppl.* p. 140. *Willd. sp. pl.* 1. p. 891. *Solander in hort. kew.* 1. p. 218. *Curt. bot. mag.* t. 252. *Rœm. et Schult. syst.* 5. p. 111. *Herb. de l'amat. fasc.* 19. t. 112. *Spreng. syst.* 1. p. 735.

C. gentianoides. *Lam. dict.* 1. p. 781. *ill.* t. 2513.

C. urticæ foliis glabra, floribus amplissimis pendulis. *Amm. ruth.* p. 11.

C. foliis lanceolatis glabris, inæqualiter dentatis, utroque extremo integris, ramis unifloris terminantibus. *Gmel. sib.* 3. p. 153.

The whole herb of a dull glaucous green. *Root* perennial, thick and fleshy. *Stems* erect, filiform, flexuose, mostly simple and single-flowered, but occasionally branched, with from 3 to 5 or even 7 flowers. *Leaves*, the primordial ones on long, slender, footstalks, heart-shaped, nearly orbicular, and serrate; those of the stem alternate, sessile, occasionally opposite, and sometimes verticillate, ovate-lanceolate, acute, sharply and unequally serrated, an inch and a half long, paler beneath, and elegantly marked with reticulated veins, the base cuneiform and entire; upper ones more ovate, and acuminate. *Flowers* solitary. *Peduncles* filiform, from 2 to 3 inches long, furnished with 1 or 2 lanceolate, leafy bractes. *Calyx* turbinate, rather depressed, smooth, glaucous, besprinkled with minute crystalline bodies; segments ovate-lanceolate, acute, entire and slightly revolute at the

margin. *Corolla* large, spreading, of a deep blue, about the size and shape of that of *Campanula persicifolia*, inflated, turbinate and depressed at the top in æstivation, the lobes semi-ovate, rather acute. *Filaments* linear, pale, membranous, dilated at the base into a broad, orbicular, petaloid disk, of a violet colour, and bearded above with white hairs. *Anthers* linear, bilocular, cream-coloured, the cells parallel, connate, opening lengthways, with the connectivum produced into a short point. *Ovarium* 5-celled, the upper half free and conical. *Style* thick, round, scarcely so long as the free portion of the ovarium. *Stigma* green, 5-lobed, with an obconical base; copiously hairy, the lobes oblong, semicylindrical, with a thick, blunt, hooked point. *Capsule* 5-celled, opening at the top by 5 elevated valves.

One of the showiest of this showy group of plants, and although introduced many years ago, it is still far from common in our gardens. It has entirely the habit of *Adenophora*, another genus separated from *Campanula*, and is chiefly distinguished from *Wahlenbergia*, by the broad petaloid bases of the filaments.

It will be found to thrive best in a mixture of peat and loam, and is increased by parting the roots, or by seeds.

Our drawing was taken at Mr. Knight's Nursery, King's Road, Chelsea.

The generic name is compounded of *πλατυς*, broad, and *κωδων*, a bell-flower, literally meaning great bell-flower. *D. Don.*



1. Stamens and Pistil. 2. Stamen separate.



Scilla maritima L.

CLARKIA elegans.

Elegant Clarkia.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. ONAGRARIÆ. *Decand. prodr.* 3. p. 35.

CLARKIA. *Suprà fol.* 157.

C. elegans, foliis ovato-lanceolatis acuminatis, petalis integris, filamentis basi barbatis; omnibus fertilibus, ovario pilosis.

Clarkia elegans. *Douglas Mus. Lindl. in bot. reg. t.* 1575.

Herb annual, erect, a foot to 2 feet high, branched and spreading. *Branches* long, filiform, purple, smooth and shining, and covered with a bluish bloom. *Leaves* scattered, on short footstalks, ovate-lanceolate, or lanceolate, acuminate, sparingly denticulate, smooth, of a dull glaucous green, an inch or two in length, the base rather acute. *Flowers* axillary, solitary, distant, in prolonged, loose spikes. *Calyx* hairy; the tube short, ventricose, and campanulate; the limb 4-partite, with lanceolate, acute segments, generally united together in pairs. *Petals* 4, a rich lilac, broadly rhomboid, crumpled and crenated at the edges, on long, narrow, linear claws, which are paler, about equal the length of the lamina, and dark-red at the base. *Stamens* 8, all fertile; 4 inner ones opposite the petals, twice shorter, and altogether smaller. *Filaments* linear, compressed, bearded at the base. *Anthers* linear, recurved, dark-red, attached near the base, composed of 2, parallel, connate cells, opening lengthways. *Pollen* pale violet, granular. *Style* filiform, slender. *Stigma* white, with 4, rounded ovate, entire, spreading, thickly papillose lobes. *Capsule* of 4 cells, and 4 valves, narrow, rather more than half an inch long, straight, or curved, shining and deeply furrowed, clothed with straight, white, spreading hairs. *Seeds* obovate, angular, ventricose.

Taller and more straggling than *C. pulchella*, and much inferior to it in beauty. It was discovered by Mr. Douglas in California, and introduced last year to the gardens of the Horticultural Society. It is a hardy annual, producing seeds abundantly, and is of very easy culture.

Our drawing was taken from a specimen communicated by the Messrs. Young, of the Epsom Nurseries.

The alternate stamens being also fertile in this species, abrogate a character, which was regarded as the chief distinction of the genus; and unless the narrow lengthened claws of the petals be considered such, there is no other available mark to prevent its merging into *Enothera*, with which it in other respects entirely accords.

For the explanation of the generic name, see fol. 157. *D. Don.*



1. A pair of Stamens. 2. Style and Stigma.





MIMULUS roseus.

Pink Monkey-flower.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

MIMULUS. Calyx prismaticus, 5-dentatus. Corolla personata, labio superiore bilobo, lateribus reflexis, inferiore trifido, laciniis subæqualibus. Stamina didynama. Antherarum lobis divaricatis. Stigma bilamellatum. Capsula inclusa, bilocularis, bivalvis, valvis integris, medio septiferis.

Herbæ oppositifoliæ. Pedunculi axillares, cævateati. *Brown l. c.* p. 439.

M. roseus, glanduloso-pubescent; foliis elliptico-oblongis acutis subintegerrimis, pedunculis calyce brevioribus, dentibus calycinis acuminatis subæqualibus, corollæ lobis emarginatis.

Mimulus roseus. *Douglas Mus. Lindl. in bot. reg. t. 1591.*

The whole herb copiously clothed with glandular hairs, very soft and slimy to the touch, exhaling a strong odour of musk. *Stem* a span to a foot high, jointed, round, with 2, opposite, rather prominent ridges. *Leaves* sessile, ovate-oblong, acute, occasionally furnished with a few, minute teeth, from an inch to 2 inches long, very soft, and marked underneath, with 5 rather prominent ribs. *Flowers* axillary, solitary. *Peduncles* cylindrical, half an inch long. *Calyx* rather longer than the peduncles, with 5, elevated angles, and 5, ovate, acuminate, conduplicate, equal, slightly recurved teeth. *Corolla* ringent, about twice as long as the calyx, the tube yellow, throat ventricose, pale, almost white, marked with purple spots, and 2, elevated, yellow, bearded folds; the lobes oblong, rounded, notched, spreading, of a deep rose-colour; the upper ones folded back; lower ones rather cuneiform, broader. *Stamens* 4, inclosed, nearly equal. *Filaments* subulate, smooth, white, half an inch long. *Anthers* pale yellow, of 2 divaricately spreading lobes, confluent at the top, and covered with bristly papillæ. *Ovarium* oblong, rather compressed, bilocular, smooth. *Style* white, com-

pressed in a contrary direction to the ovarium, of which it is double the length. *Stigma* composed of 2, broad, rounded, almost orbicular, thin lamellæ, covered above, but especially at the border, which is crenulate, with minute papillæ.

This very distinct species was discovered by Mr. Douglas in Northern California, and but recently introduced by him to the garden of the Horticultural Society. In affinity it comes next to *M. moschatus*, and, like it, exhaling a powerful odour of musk. The plant is perennial, with a somewhat woody stem, and is increased by seeds, or by cuttings; but although thriving sufficiently well in the open border during the Summer months, it requires to be protected in the greenhouse in Winter. The flowers are produced but sparingly in the bosom of the leaves, and the plant by no means answers the expectations that had been formed of it. We are indebted to Mr. Knight, of the Exotic Nursery, King's Road, Chelsea, for the specimen whence our drawing was taken. *D. Don.*



1. Lower lip of the Corolla. 2. Pistil.



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PENSTEMON ovatus.

Ovate-leaved Penstemon.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. CHELONEÆ. *Calyx* 5-partitus. *Corolla* fauce ventricosa, limbo 5-loba, bilabiata, æstivatione imbricatâ. *Stamina* 4 fertilia didynama; quinti rudimento sterili, sæpius elongato, barbato. *Antheræ* biloculares: *loculis* apice confluentibus. *Stigma* simplex, indivisum. *Capsula* bilocularis, apice septicido-dehiscens, polysperma: *septo* incompleto. *Semina* erecta, compressa, margine membranacea: *testâ* membranacea: *albumen* carnosum, parvum. *Embryo* sub-foliaceus.

Herbæ v. suffrutices (Amer. Septentr.). *Folia* opposita. *Inflorescentia* paniculata v. spicata.

Obs. Tribus Bignoniaceis proximè affinis; calyce tamen subpolyphyllo, stigmate simplici, seminibus erectis albuminosis facile distinguitur. *D. Don* *Ms.*

PENSTEMON. *Calyx* 5-partitus. *Corolla* tubulosa, fauce ventricosa, limbo 5-loba, bilabiata. *Staminum* quinto sterili, sæpius elongato, apiceque barbato. *Antheræ* imberbes. *Capsula* bilocularis, septicido-dehiscens: *valvis* apice bifidis. *Semina* compresso-angulata, margine membranacea.

Inflorescentia paniculata!

P. ovatus, pubescens; foliis ovatis cordatisve dentato-serratis; radicalibus petiolatis; superioribus amplexicaulibus, paniculâ racemosâ, segmentis calycinis lanceolatis, corollis glandulosis.

Penstemon ovatus. *Douglas in bot. mag. t. 2903.*

The whole herb of rather a dark green. *Stems* upright, cylindrical, from a foot to three feet high, thickly clothed with short spreading hairs. *Leaves* ovate or cordate, acute, serrate, with sharp, nearly equal teeth, at first pubescent, but afterwards becoming glabrous; radical ones broader, on long footstalks, sinuately and more coarsely toothed, from two to four inches long, and sometimes two in breadth, the base obliquely cordate, or sometimes nearly truncate, slightly attenuated at the middle; the upper ones and bractes clasping the stem, and frequently entire. *Footstalks* narrow, two to three inches long, channelled above, bluntly keeled below. *Flowers* numerous, rather crowded, disposed in a thyrsiform panicle. *Segments of the calyx* ovate-lanceolate, rather acute, with a narrow membranous border, shorter than the tube of the corolla, and as well as the pedicels furnished with short,

glandular hairs. *Corolla* of a bright azure blue, afterwards changing to purple, copiously clothed with glandular pubescence, varying in size in different individuals, from half an inch to nearly an inch long; tube white below; throat ventricose; upper lip recurved, lower one 3-lobed, spreading, bearded above with white, jointed hairs; lobes oblong, entire, even. *Stamens* 5, of which 4 are fertile. *Filaments* slightly compressed, bent, smooth, their upper half purple; upper pair quite free, thickened and yellow at the base; the two lower ones, which are also the longest, attached, for nearly half their length, to the tube of the corolla; sterile one attached half way, and by bending forwards occasions an elevated fold in the tube of the corolla; the apex flattened, narrow and spathulate, and bearded above with yellow bristly hairs. *Anthers* naked, purple behind, the cells confluent at the top. *Style* filiform, smooth. *Stigma* an obtuse dot, covered with minute papillæ. *Capsule* ovate, acuminate, bilocular; valves crustaceous, concave, bifid at the top. *Partition* double, formed by the introflexed edges of the valves. *Seeds* dark-brown, angular, dotted, compressed, with a pale narrow membranous border, their taste slightly acrid.

A hardy perennial, native of limestone rocks on the high mountains about the Grand Rapids of the Columbia River, whence it was introduced by Mr. Douglas to the Garden of the Horticultural Society, in 1826. It delights in a calcareous or light loamy soil, and is increased by slips, or by seeds. This highly ornamental genus has of late been greatly enriched by the discoveries of our indefatigable friend, Mr. Douglas, but none of the others, in our opinion, surpasses the present in the rich colouring of its flowers.

The flowers are found to vary considerably in size, but it is rather to be attributed to the effect of luxuriance than to any actual difference in the plants themselves. Dr. Hooker, and Mr. Douglas, appear to have entirely overlooked the attachment of the sterile filament, and have evidently mistaken the prominent fold of the corolla for an appendage to it. Sometimes the five stamens are fertile, and then the filaments are all free. Our drawing was taken at Colvill's Nursery, King's Road, Chelsea, in July last.



1. Calyx and Pistil. 2. Corolla laid open. 3. Large-flowered variety.
4 & 5. Calyx and Corolla of the same.





1855

Lupinus, *Lupinus* L. *Prunella* Oct 1 1855.

J. W. Smith

LUPINUS ornatus.*Ornamental Lupine.**Linnean Class and Order.* DIADELPHIA DECANDRIA.*Natural Order.* LEGUMINOSÆ. *Juss. gen. p. 345.**LUPINUS.* Suprà fol. 12.

L. ornatus, perennis, argenteo-sericeus; foliis subseptenis lineari-lanceolatis mucronatis, calycis labio superiore bifido; inferiore acuto carinato longiore, leguminibus 4-5-spermis.

Lupinus ornatus. *Douglas Mus. Lindl. in bot. reg. t. 1216.*

Plant herbaceous, perennial, thickly clothed with short adpressed silky hairs, of a silvery hue. *Stems* erect, a foot or a foot and a half high, nearly simple, cylindrical, and marked with two elevated lines arising from the decurrent bases of the leaves. *Leaves* on filiform footstalks, from an inch to two inches long, thickened and slightly flattened above at the base. *Leaflets* mostly 5 or 6, but occasionally 4 or 7, and sometimes rarely 12, linear-lanceolate, pointed, silvery, slightly channelled above, furnished below with a prominent midrib, attenuated towards the base, broader upwards, from an inch to an inch and a half long, the apex slightly recurved. *Stipules* narrow, somewhat subulate, erect, rather adpressed, channelled, deciduous, three lines long. *Flowers* numerous, scattered, or somewhat aggregate and semiverticillate, disposed in loose, spiked racemes, of from three to seven inches long. *Pedicels* very short, purplish. *Bractes* caducous, lanceolate, attenuated, concave, membranous, rather longer than the pedicels. *Calyx* silky, the lips ovate-oblong, concave, upper one notched, lower rather longer, acute, keeled. The *verillum* and *wings* of the Corolla varying from a bright blue to a pale purple, veiny, the disk of the former white, with a yellow spot, terminated by a short carinate point, with the sides folded back. *Keel* white, with a dark purple, acuminate point, the edges fringed with soft hairs. *Stamens*

monadelphous, five shorter and stouter with oblong anthers. *Style* filiform, glabrous, attenuated towards the top. *Stigma* a small fringed disk. *Pod* silky, with four or five small, white, smooth seeds.

A native of mountain valleys on the Columbia River, where it was discovered by Mr. Douglas, and introduced by him to the Garden of the Horticultural Society in 1827. The plant is now not uncommon in collections, as it produces its seeds in abundance, and is found to be one of the hardiest of the whole genus. It varies a good deal in the colour of the flowers, the pale purple variety represented in our plate appearing to be the most common.

A hardy perennial, flowering from May till the commencement of Winter, and appearing to delight in a sandy soil. Drawn at Mr. Knight's Nursery, King's Road, Chelsea



1. Calyx. 2. Keel. 3. Stamens. 4. Pistil. 5. Pod.





JH

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From G. Gray's *Ex. nasella* Dec 1, 1833.

CLÉMATIS campaniflora.

Bell-flowered Virgin's Bower.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen. p. 231.*

CLEMATIS. Calyx 4-8-phyllus, coloratus, aestivatione valvatâ.
Petala nulla. Carpella plurima, stylo persistenti elongato coronata.

Radix perennis, fibrosa. Caulis herbaceus v. suffruticosus, plerumque scandens. Folia opposita, rard indivisa. Involucrum quandoque adest calyciforme.

C. campaniflora, foliis biteruato-pinnatis : foliolis ovatis mucronulatis glabris, pedunculis solitariis, floribus campanulatis, sepalis ovato-oblongis acutis margine apiceque revolutis.

Clematis campaniflora. *Brot. fl. lusit. 2. p. 369. Decand. syst. 1. p. 181. prodr. 1. p. 9. Lodd. bot. cab. t. 987. G. Don gen. syst. gard. and bot. 1. p. 9.*

A slender climbing Shrub, with filiform, slightly angular, green, pubescent, stems, rising to the height of six feet or more. *Leaves* biternately pinnate. *Leaflets* ovate, or ovate-oblong, mucronulate, entire, or occasionally with 2 or 3 lobes, smooth and shining on both sides, dotted beneath, from half an inch to an inch long, fringed at the margin with short hairs ; the terminal ones smaller. *Petiole* and *rachis* narrow, almost filiform, pubescent, channelled above. *Flowers* comparatively small, solitary, campanulate, fragrant, white, with occasionally a slight shade of purple. *Peduncles* filiform, pubescent, an inch or an inch and a half long. *Sepals* 4, ovate-oblong, connivent at the base, little more than half an inch long, with the edges thinner and folded back, the apex rather acute and revolute. *Filaments* linear-cuneate, compressed, pale green, occasionally furnished with a few hairs. *Anthers* longer than the filaments, obtuse, the cells narrow, white, attached to the edge of a broad green connectivum. *Ovaria* ovate, compressed, and together with the long awl-

shaped style clothed with adpressed silky hairs. *Stigmas* blunt, pruinose.

This very distinct species was discovered by the late Professor Brotero in hedges on the road leading from Coimbra to Oporto, flowering in June and July, and first recorded by him in the work above referred to. Its habit is entirely that of *C. viticella*, to which it also comes nearest in affinity, but the much smaller flowers, and pointed sepals, connivent below, will readily distinguish it.

Our drawing was taken in the end of July last, at the Chelsea Botanic Garden, to which it had been sent from the Royal Gardens at Berlin, under the name of *C. viornoides*.

The plant appears to be perfectly hardy, and may be increased both by layers and seeds.

The generic name is derived from *κλημα*, a vine branch, in allusion to the climbing habit of most of the species of this genus. *D. Don.*



1. Stamen. 2. Pistils. 3. Carpels.





1822

GILIA aggregata.

Tufted-flowered Gilia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. POLEMONIACEÆ. *D. Don in edinb. phil. journ.* 1822. p. 53.

GILIA. Calyx tubulosus, 5-fidus, membranaceus. Corolla infundibuliformis, limbo 5-loba: laciniis sæpiùs obovatis, integris. Stamina fauci inserta, rarò inclusa. Antheræ oblongæ, erectæ. Capsula loculis polyspermis. Semina angulata. Radicula cotyledonibus brevior.

Herbæ (Americanae) annuæ. Folia plerumque alterna, pinnatifida. Flores pedunculati, subsolitarii v. fasciculati.

G. aggregata, foliis pinnatisectis: segmentis linearibus mucronatis, floribus fasciculato-paniculatis, corollæ tubo calyce 5-plò longiori: laciniis ovato-lanceolatis acuminatis canaliculatis.

Gilia aggregata. *D. Don in edinb. phil. journ.* 1822.

G. pulchella. *Dougl. Mss. Benth in bot. reg. fol.* 1822. ad calcem.

Ceanothus aggregata. *Pursh fl. amer. septentr. l.* p. 147. [*affirmans exemplario archetypo in Herb. Lamb.*]

Ipomopsis elegans. *Lindl. in bot. reg. t.* 1231.

Root fibrous, biennial. *Stem* erect, rising to the height of 3 feet, with stiff filiform branches, copiously clothed with short glandular pubescence, intermixed with long, jointed, spreading hairs, hoary, especially in native samples. *Leaves* alternate, spreading, somewhat recurved, deeply pinnatifid, occasionally undivided and lanceolate; segments linear, with a rather broad, convex midrib, terminated by a cartilaginous point; the terminal one considerably longer. *Flowers* copious, fasciculate, often disposed in a diffuse panicle. *Peduncles* rounded, minutely glandular. *Bractes* subulate, pointed, recurved, longer than the peduncles. *Calyx* campanulate, 5-cleft, 5-ribbed, with the interstices finely membranous; segments awl-shaped, pointed, erect, furnished at the base with a broad, scariose margin. *Corolla* funnel-shaped, glandular, carmine; tube narrow, an inch long, five-sided; the limb 5-cleft, shorter than the tube; segments ovate-lanceolate, acuminate, recurved and spreading, concave, with in-

volute edges, and together with the mouth marked with numerous irregular white spots; the æstivation induplicate, and but slightly involute. *Stamens* 5, inserted in the mouth of the corolla, alternating with the segments, exserted. *Filaments* capillary, purple. *Anthers* oblong, yellow, with parallel cells, free at the base, and opening lengthways. *Style* capillary, red. *Stigmata* 3, linear, obtuse, compressed, recurved and pruinose. *Ovarium* oblong-elliptical, 3-celled, seated on a glandular disk. *Ovula* angular, several in each cell.

A native of the North-west Coast of America, whence it was introduced to the Garden of the Horticultural Society, by Mr. Douglas, in 1827. On a careful comparison of the native sample in Pursh's Herbarium, collected by Captain Lewis, at Hungry Creek, in 1806, which, although but partially developed, and more copiously clothed with hairs than the cultivated ones, we are satisfied that there cannot be a doubt as to the identity of the two plants. It appears to delight in a loamy soil, and is increased by seeds. When in blossom, few plants of this family surpass it in beauty. It is very nearly related to *G. coronopifolia*, but differs in its more copious pubescence, and in the narrower, concave, acuminate, segments of its corolla. Our drawing was taken from Mr. Knight's collection, in July last.

The *Phlox pinnata* of Cavanilles, formerly referred by me to this genus, with which its habit more particularly agrees, I am now convinced belongs to *Collomia*, from its stamens being inclosed within the tube of the corolla, and from the monospermous cells of its capsule.

The *Polemoniaceæ* evidently constitute an osculant group, connecting the *Bignoniaceæ*, *Apocynæ*, *Hydrophylleæ*, and *Convolvulaceæ*, the parts of the flower affording likewise an example of almost perfect symmetry. In its flat winged seeds, foliaceous embryo, arborescent stem, and large funnel-shaped blossoms, *Cantua* emulates some members of the former family, while the opposite entire leaves, corymbose inflorescence, and twisted æstivation of *Phlox* forcibly remind us of some *Apocynæ* and *Gentianeæ*, and by means of *Polemonium* the transition to *Hydrophylleæ* is clearly made out.

The genus was named by Ruiz and Pavon after Signor Gil, author of phytological observations on some exotic plants cultivated about Rome. *D. Don.*



1. Style. 2. Corolla. 3. Ovarium.



SÁLVIA angustifolia.*Narrow-leaved Sage.**Linnean Class and Order.* DIANDRIA MONOGYNIA.*Natural Order.* LABIATÆ. *Juss. gen.* 110.*SALVIA.* Suprà fol. 59.

S. angustifolia, herbacea; foliis subsessilibus lineari-cuneatis dentatis glaucis, verticillastria remotis paucifloris, calycibus tubulosis hispidis tridentatis.

Salvia angustifolia. *Cavan. ic.* 4. p. 9. t. 317. *Vahl en.* 1. p. 255. *Ræm. et Schult. syst.* 1. p. 222. *Bentham in bot. reg.* t. 1554. *labiat.* p. 249.

S. virgata. *Orteg. dec.* 1. p. 3.

S. reptans. *Jacq. hort. Schænbr.* 3. p. 38. t. 319.

Stem erect, slender, from a foot to three feet high, branched, bluntly 4-sided, sparingly furnished with rough bristly hairs, bearded at the joints. *Leaves* linear, acute, with a few shallow teeth, flat, glaucous, an inch to two inches long, attenuated towards the base; the lower ones rather cuneiform. *Racemes* long, thin. *Verticills* of from 2 to 5 flowers. *Bractes* ovate-lanceolate, acuminate, caducous, thrice longer than the pedicels. *Calyx* tubular, furrowed, hispid with whitish hairs, with 18 prominent ribs, partly stained with violet; the teeth three, ovate, acuminate, upper one broader. *Corolla* of a deep azure, twice longer than the calyx; tube ventricose, rather longer than the calyx; upper lip concave, erect, entire, pubescent; lower one twice longer, with rounded lobes, the middle one very broad, reniform, spreading, notched. *Stamens* shorter than the corolla. *Connectivum* linear, adnate, toothed behind. *Style* scarcely exerted, with two lines of hairs. *Stigma* forked; the lower lobe elongated, awl-shaped.

A native of dry mountainous places in the temperate parts of Mexico, whence it was introduced into the Royal Gardens at Madrid, in 1795. It grows well in any light soil, is readily increased both by seeds and cuttings, and requires protection in Winter, being no more than an annual, if kept in the open border.

Our drawing was derived from Mr. Dennis's Nursery, at Chelsea, in August last.

The generic is already explained at fol. 59. *D. Don.*



1. Calyx split open. 2. Stamens. 3. Style.





... .. by S. Engstrom 16/9. Published by ... 1855. 34.

CALCEOLARIA sessilis.

Fragrant Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ.

Trib. V. CALCEOLARIÆ.

CALCEOLARIA. *Calyx* 4-partitus, aestivatione valvatâ! *Corolla* irregularis, bilabiata: *labiis* margine involutis, saccatis; *superiore* quandoque minimo v. obsoleto. *Stamina* 2, fundo corollæ inserta. *Anthera* bilocularis: *loculis* ventricosis divergentibus, longitudinaliter dehiscentibus, apice confluentibus: *septo* elevato, membranaceo. *Stigma* indivisum, subpeltatum, minutè papillosum. *Caprula* conica, bilocularis, bivalvis: *valvulis* crustaceis, apice bifidis, marginibus revolutis, placentiferis, septum contrarium duplicatum constituentibus. *Semina* ovata, minuta, lævia, fulva, numerosissima, umbilico mucroniformi, funiculo umbilicali suffulta: *testâ* membranaceâ: *albumen* parcius, carnosum. *Embryo* teres, rectus: *radiculâ* cotyledonibus longiori, centripetâ.

Herbæ v. suffruticeæ (Amer. Austr.) glanduloso-pubescentes, foliis oppositis sæpius indivisis, floribus terminalibus plerumque corymboso-paniculatis sæpiusque flavis.

Obs. Genus, cujus affinitas adhuc dubia sistit, omninò oculans videtur inter Scrophularinæ et Gesneriaceas; his calycis aestivatione valvatâ, capsulæ valvulis revolutis placentiferis, seminibus minutissimis funiculo umbilicali longiori præditis, habitu inflorescentiæ folisque oppositis plerumque rugosis crenatis; illis antheris bilobis apice confluentibus, seminibus albuminosis convenit. *C. petiolaris* aliæque in hortis proferunt quandoque corollæ tubulosæ sub-regulares! *D. Don. Mss.*

C. sessilis, suffruticosa; foliis sessilibus lanceolatis acuminatis crenatis rugosis subtùs incanis, cymis paniculatis, corollæ labiis subæqualibus ventricosis styloque elongato glandulosis.

Calceolaria sessilis. Ruiz et Pavon *fl. peruv. et chil.* 1. p. 18. *Syst.* 1. p. 332. Lindl. in *bot. reg.* t. 1628.

Stem upright, suffruticose, branched, from a foot to two feet high, of a grey colour, the branches erect and downy. *Leaves* sessile, with rather a broad base, lanceolate, acuminate, crenate and slightly revolute at the border, an inch and a half long, wrinkled and scabrous above with elevated points, veiny and hoary beneath; those of the branchlets narrow and almost linear. *Flowers* cymose, crowded into a thyrsiform panicle. *Peduncles* filiform, copiously clothed with short glandular hairs. *Bractes* leafy, ovate-lanceolate, acute, yellowish, crenate, upper ones entire. *Calyx* yellow

divided into 4, broad, elliptical, obtuse, unequal, spreading, lobes. *Corolla* of a sulphur colour, composed of two nearly equal inflated lips, covered with glandular pubescence; the lower lip rather larger, with the inner edge truncate and fleshy. *Filaments* 2, compressed, stout, glandular. *Anthers* cream-coloured, of 2 spreading lobes, confluent at the top. *Ovarium* short, conical, and like the style copiously glandular. *Style* compressed, longer than the stamens, and thrice longer than the ovary. *Stigma* small, peltate.

We willingly follow Dr. Lindley in considering this the *C. sessilis* of Ruiz and Pavon, as it agrees very well with the meagre description given of that species in the *Flora peruviana*, and as there exists no authentic sample of the plant to determine the point with greater certainty.

It is nearly related to *C. integrifolia*, and like it pretty generally diffused throughout Chile. We have examined native specimens from Mr. Caldcleugh, Mr. Bridges, and Mr. Cuming. The leaves being hoary beneath and broader at the base, the nearly equal lips of the corolla and copiously glandular style readily distinguish it from *integrifolia*. The flowers are fragrant, with a faint resemblance to that of the garden hyacinth, a circumstance we have not remarked in the *integrifolia*.

We are indebted to Mr. Knight, of the Exotic Nursery, King's Road, Chelsea, for the fine specimen whence our drawing was taken. It had been raised from seeds collected in Chile by Mr. Cuming. It requires a light sandy soil, and is easily increased by seeds and cuttings.

This genus evidently forms an osculant group between the two families of *Scrophularinæ* and *Gesneriaceæ*, bearing rather a stronger affinity to the latter than to the former, the albuminous seeds being the only point in which they differ.

The generic name alludes to the resemblance of the corolla to a sabot, and is derived from *calceolus*, a little shoe. *D. Don.*

—●●●—
1. Calyx. 2. Corolla.

CORRECTIONS in No. LII. for SEPTEMBER.

Fol. 205. *ALSTRÆMERIA aurantiaca*.

On a careful reconsideration of this article, we are now satisfied of the plant being identical with *A. versicolor* of Ruiz and Pavon (*fl. peruv. et chil.* p. 59.), which name must therefore supersede our own. Whether the serrated sepals in *A. hæmantha* afford a sufficiently permanent character to establish it as distinct from this species, further observations must determine. In the variety *Simsii* (Tab. 267. Series 1.) the sepals are nearly entire.

Fol. 206. *COLLOMIA lateritia*.

This name must give place to that of *coccinea*, applied to it by Lehmann, of which we were not aware at the time of publication. In the specimen figured by Dr. Lindley at Tab. 1622 of the Botanical Register, the flowers are larger than in ours, and the tube of the corolla considerably longer than the calyx, which clearly establish their identity with the *Phlox linearis* of Cavanilles, and consequently with *C. Cavanillesii* of Hooker and Arnott.

N. B. The Numbers of the Plates of *Alstræmeria versicolor* and *Platycodon grandiflorum* have been inadvertently transposed.





— Report 266

Pub. by S. Rodgway N.Y. - March 1st 1856

VERBENA sulphurea.*Sulphur-coloured Vervain.**Linnean Class and Order.* DIDYNAMIA ANGIOSPERMIA.*Natural Order.* VERBENACEÆ. *Brown prodr.* 1. p. 510.*VERBENA.* Suprà fol. 9.

V. sulphurea, diandra, procumbens, subsericea; foliis multifidis: segmentis linearibus obtusis margine revolutis, spicâ capitatâ, corollis glabris: laciniis flaccidis bilobis.

Plant perennial, tufted, canescent, with rough spreading hairs. *Stems* many, procumbent, leafy, acutely quadrangular, a span long. *Leaves* sessile, opposite, deeply pinnatifid, about an inch long, the segments linear, obtuse, revolute at the margin, sometimes falcate. *Flowers* of a sulphur colour, larger than in *V. multifida*, thickly arranged in a capitate spike. *Peduncles* from 2 to 3 inches long, erect. *Bractes* lanceolate, acuminate, shorter than the calyx, clothed with bristly hairs. *Calyx* tubular, bristly, with 5 angles, and 5 teeth; the teeth upright, awl-shaped, pointed, unequal, folded. *Corolla*, the tube rather longer than the calyx, perfectly glabrous, both within and without, slightly ventricose at the apex; limb spreading, 5-parted, the segments oblong, wedge-shaped, cloven, rather flaccid, 2 lower ones narrower. *Stamens* 2, inserted in the mouth of the corolla, exserted. *Filaments* very short, compressed, smooth. *Anthers* large, purple. *Ovarium* smooth. *Style* compressed, green, dilated upwards, with the sides rather produced beyond the glandiferous stigma.

This pretty little Vervain was raised from Chilian seeds received from Mr. Hugh Cuming, by our friend, Mr. William Christy, Junior, to whom we are indebted for the spe-

cimen here figured, which blossomed in his collection at Clapham, in the beginning of August last. The plant is apparently perennial, and forms a close spreading patch. It appears to prefer a loamy soil, and grows luxuriantly in the open border during Summer, but requires the protection of a pit or frame in Winter. Cuttings of it root very readily.

Nearly related to *V. crithmoides* and *radicans* of Gillies and Hooker, but differs from the former in its glabrous corolla, with the tube not much longer than the calyx; and from the latter by its hairy stems, narrower segments of its leaves, and shorter flowers.

The generic name is already explained at fol. 9. *D. Don.*



1. Bractea. 2. Calyx. 3. Corolla laid open. 4. Stamen. 5. Pistil.





1. 2. 3. 4. 5. 6. 7.

Pub. by S. Augustus & Co. Providence Jan. 1. 1854.

7. 8.

ADÉSMIA uspallatensis.

Thorny Adesmia.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. LEGUMINOSÆ. *Juss. gen. p.* 345.

ADESMIA. *Calyx* 5-fidus, laciniis acutis sub-æqualibus. *Corolla* papilionacea, vexillo juniore super alia petala complicato, carinâ apice curvo-truncatâ. *Stamina* distincta, approximata. *Legumen* compressum transversè pluri-articulatum, suturâ superiore subrectâ crassiusculâ, inferiore sinuato-lobatâ, articulis 1-spermis demùm secedentibus suborbiculatis. *Semina* compressa reniformi-orbiculata.

Herbæ (v. suffrutices) Australi-Americane. *Stipulæ lanceolatae*. *Folia abruptè pinnata; petiolo in setulam producto*. *Pediculi axillares 1-flori et foliorum superiorum abortu in racemum terminalem dispositi*. *Decand. prodr.* 2. p. 318.

A. uspallatensis, fruticosa, spinosa; foliolis 5-jugis ovalibus obtusis glabris, dentibus calycinis semiovatis acutis reflexis, lomentis 2-3-articulatis, setosis; setis plumosis.

Adesmia uspallatensis. *Gill. Mus. Hook. and Arnott in bot. misc.* 3. p. 192.

An upright, branched, thorny shrub, seldom exceeding a foot in height, with round smooth branches; the thorns, which are abortive peduncles, are terminal, forked, with straight simple awl-shaped divisions. *Leaves* rather fasciculate, abruptly pinnate, leaflets mostly in 5 pairs, oval, obtuse, channelled, glabrous, scarcely 2 lines long. *Racemes* terminal, few-flowered. *Peduncles* short, capillary, slightly pubescent. *Calyx* short, campanulate, slightly pubescent, 5-toothed; teeth very short, semi-ovate, acute, ciliated, reflexed, equal. *Corolla* papilionaceous, of a rich yellow colour; vexillum nearly orbicular, reflexed, the front of a deep yellow, marked with dark red lines, behind of a livid hue, the base within bearded with white down; wings semi-cordate, nearly equal the length of the keel, with downy claws; keel cucullate, ventricose, with the apex truncate

and emarginate, the suture below bursting, with downy edges. *Stamens* 10, separate. *Filaments* awl-shaped, white, smooth, flat, and broader at the base; the tenth shorter. *Anthers* round, yellow. *Ovarium* compressed, villous. *Style* flattened, attenuated upwards. *Stigma* compressed, nearly orbicular, pruinose. *Pod* composed of 2 or 3 semi-orbicular, compressed, one-seeded joints, ornamented with long spreading purple feathery hairs.

A singular genus, nearly related to *Hedysarum*, but differing essentially in the separation of the stamens. The species are peculiar to South America, and their number has been much increased of late by the discoveries of Dr. Gillies and Mr. Cuming, recorded in the third volume of the Botanical Miscellany.

The one now before us forms a dwarf thorny shrub, rarely exceeding a foot in height. It evidently varies a good deal in the number of its leaflets, and also in other minor points; circumstances which dispose us to hesitate in recognizing as distinct species the *A. horrida* and *trijuga*.

Our drawing was taken in July last, at the Botanic Garden, Chelsea, where the plant had been raised from seeds, collected in Chile, by Mr. Cuming. The plant requires protection in Winter, is fond of a light loamy soil, and may be increased by cuttings.

The pods, when full grown, are particularly pretty, from the long feathery hairs with which they are adorned.

The generic name has reference to the separation of the stamens, and is compounded of *a* privative, and *δεσμος*, union. *D. Don.*



1. Leaf. 2. Peduncle and Calyx. 3. Vexillum. 4. Wing. 5. Keel. 6. Stamens.
7. Pistil. 8. Bristles of the lomentum.





J. H. Hunt del. J. H. Hunt sc. J. H. Hunt sc. 1834.

J. H. Hunt sc.

FRANCÒA *ramosa*.*White-flowered Francoa.**Linnæan Class and Order.* OCTANDRIA MONOGYNIA.*Natural Order.* GALACINÆ. *D. Don in Edinb. Phil. Journ. Dec.* 1828. p. 53.*FRANCOA.* Suprà fol. 151.

F. ramosa, segmentis calycinis ovato-lanceolatis acutis læviusculis, staminibus sterilibus obtusis, stigmatibus cuneatis bilobis, scapo ramoso.
Francoa ramosa. *D. Don in l. c.* p. 52.

Plant perennial. *Caudex* very short, round, about the thickness of a writing quill, and from 2 to 3 inches high; clothed with soft spreading hairs. *Scape* from a foot and a half to 3 feet high, erect, branched, cylindrical, green, the base densely pilose, becoming glabrous and shining towards the top. *Branches* slightly angular, shining, from a span to a foot long. *Leaves* lyrate, pale green, thickly clothed with soft hairs, from 3 to 7 inches long, wrinkled above, paler and varicose beneath, the segments opposite, rounded, sinuately lobed and toothed, wavy and curled, with the base abruptly cordate, the terminal one large, cordate-oblong, obtuse, sinuately lobed, waved, cucullate at the base, with the posterior lobes connivent. *Footstalks* very short, winged, a little decurrent at the base, with a stout midrib, which is broader at the base, flat above, and convex beneath. *Flowers* in a spiciform raceme, erect, smaller than those of the other species, white, or occasionally having a faint tinge of rose colour. *Pedicels* very short, smooth, slightly angular. *Bractes* linear, acute, longer than the pedicels, and sometimes slightly fringed. *Calyx* smooth and shining, four, or rarely five cleft, the segments ovate, acute, or acuminate, faintly 3-nerved. *Petals* 4, or rarely 5, twice the length of the calyx, obovate, obtuse, bluntly keeled, with a stout midrib, with branching veins, the claw very short and folded. *Sta-*

mens 16, or rarely 20, the outer half sterile and very short, cylindrical, blunt, yellowish, with the apex slightly recurved; the inner ones alternating with the outer ones, and thrice longer, fertile, awl-shaped, smooth, of a faint rose colour. *Anthers* pale purple, oblong, square, obtuse, 2-celled, the cells parallel, opening lengthways, with prominent valves. *Ovarium* 4-celled, the cells alternating with the lobes of the calyx. *Style* none. *Stigmata* rounded, almost orbicular, entire or lobed, green, but afterwards changing to purple.

This species grows abundantly on the hills near Valparaíso, in Chile, and was first described in the work above referred to, from specimens gathered by my valued friend, Mr. Caldcleugh. It has been also collected by Mr. Cuming and Mr. Bridges, and to the former we are indebted for its introduction to the gardens, many plants of it having been raised from seeds communicated by him.

We have to thank Mr. Knight, of the Exotic Nursery, King's Road, Chelsea, for the specimens whence our drawing was derived. They blossomed in his choice collection in July last. The plant appears to thrive best in a mixture of sandy peat and loam, and is readily increased by seeds, which it perfects abundantly. We have nothing to add to the account of the genus given at fol. 151 and 155. *D. Don.*



1. Calyx. 2. Stamen. 3. Pistil. 4. Capsule.





PETROMARULA pinnata.

Wing-leaved Candiot Rampion.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.

PETROMARULA. *Calyx* 5-fidus. *Corolla* 5-partita. *Stamina* 5, lobis corollæ alterna; filamentis basi latis, antheris longioribus, polline violaceo. *Stylus* glaber. *Stigma* capitatum, crassum, pilosiusculum. *Ovarium* 3-loculare, inferum. *Capula* erecta, poris 3 ad media partem lateraliter depiscens.

Herba Cretæ incola, foliis radicalibus primò petiolatis ovato-acutis, deinde pinnatis, petiolis marginatis et lobatis; floribus laxè racemosis, pedicellatis. *Alph. Decand. Monogr. Campan.* p. 209.

P. pinnata.

Petromarula pinnata. *Persoon Syn.* 1. p. 194. *Alph. Decand. l. c.* p. 209.

Phyteuma pinnata. *Lin. sp. pl.* 1. p. 242. *Lam. ill. n.* 2591. *Willd. sp. pl.* 1. p. 295. *Vent. jard. Cels. t.* 52. *Smith prodr. fl. græc.* 1. p. 144.

fl. græc. t. 226. *Ræm. et Schult. syst. veg.* 5. p. 86.

Rapunculus creticus, seu *Pyramidalis altera.* *Bauh. pin.* p. 93. *Tournef. inst.* 1. p. 113.

R. creticus, *Petromarula.* *Bauh. hist.* 2. p. 811.

R. creticus seu *Petromarula cretica.* *Park. theatr.* p. 649. *f. 6.* *Moris. hist. sect.* 5. t. 1. *f.* 8.

Petromarula di Candia. *Pon. bald.* p. 93.

P. Rapunculo Candiot. *Imperat. hist.* p. 668.

P. Rapunculum creticum Imperati Valerianæ foliis. *Barr. ic. t.* 1154.

Plant perennial, tufted, abounding in milky juice. *Root* fleshy, fusiform, white. *Stems* erect, branched, from 3 to 4 feet high, or more, about the thickness of one's finger, solid, angular, glabrous, green, fragile, glossy. *Branches* long, erect. *Leaves* stalked, deeply and lyrate cut, almost pinnate, glabrous, green, veiny and paler beneath; the segments ovate, acuminate, stalked, doubly serrate, with large coarse, pointed, spreading teeth, an inch to two inches long, obliquely rounded at the base, rather distant, but approximate in pairs, and often interposed by other minute, lanceolate, almost entire, pointed ones. *Footstalks* whitish, semi-cylindrical, channelled above, with a greenish membranous border, about a span in length. *Flowers* fasciculate, disposed in very long, terminal, loose, spiked racemes. *Pedicels* very short, angular, and, like the bractes and calyx, clothed with minute papillæ. *Bractes* awl-shaped, pointed, entire, rather longer than the pedicels. *Calyx* with 5 awl-shaped, pointed, entire, erect segments;

the tube round and angular. *Corolla* of a pale azure blue, thrice longer than the calyx, deeply parted into 5, linear, acute, channelled, reflexed segments, clothed, but especially towards the base, with papillary pubescence. *Stamens* 5, shorter than the corolla. *Filaments* compressed, of a deep blue, stiff and callous, glossy, broad, spathulate, and papillose at the base, with the edges connivent and closed. *Anthers* linear, bluntly keeled, yellow, of two narrow, parallel cells, opening lengthways. *Ovarium* inferior, of three cells, crowned by a fleshy, glandular, depressed disk. *Style* stout, cylindrical, longer than the stamens, glabrous. *Stigma* large, capitate, of three broad, thick, connivent, blunt, papillose lobes.

This remarkable plant is frequent on the rocky shores and mountainous parts of Candia, and also on mount Baldo in Italy. It appears to have been several times introduced to this country, first in 1640, and more recently by Dr. Pitcairn, in whose rich collection, at Islington, it flowered in 1791; but from the great difficulty attending its culture in this moist climate, it has always continued extremely rare in collections, and we know of none other at present that contains the plant, save that of Messrs. Young, at Epsom, where it blossomed in September last. Mr. Penny, the intelligent foreman of that establishment, informs us, that the plant from which our drawing was obtained, was planted in the open ground in May, in a rich loamy soil, where it grew vigorously, throwing up from 40 to 50 stems, which began to blossom towards the end of August. It requires the protection of a frame or greenhouse in Winter, and is increased slowly by division.

We have, in the mean time, adopted the genus *Petromarula*, as proposed by Persoon and M. Alphonse De Candolle; although it must be confessed, that we have been unable to discover any valid characters whereby to distinguish it from *Phyteuma*. The stigma is not simple, but composed of three lobes, thicker than in the other species of *Phyteuma*, the leaves are merely deeply lobed, and the inflorescence is precisely the same with that of *P. amplexicaule*, but more developed.

The name is compounded of *πετρα*, a rock, and *μαρον*, an herb, from the plant growing on rocks. *D. Don.*



1. Calyx and Pistil. 2. Stamen. 3. Segment of the Corolla. 4. Outline of the plant in miniature.





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1834

Erigeron annuus L. f. *Erigeron* Phil. 1834.

J.W. Foster

ZAPPANIA nodiflora; var. rosea.

Pink-flowered Knotted Zappania.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. VERBENACEÆ. *Brown prodr.* 1. p. 510.

ZAPPANIA. Calyx 5-dentatus, v. maturitate bivalvis. Corolla subinfundibuliformis, bilabiata, labio superiore bilobo, inferiore tripartito, æquali. Stamina 4, didynama. Pericarpium tenue, evanidum. Semina 2. Flores capitati. *Brown l. c.* 1. p. 514.

Z. nodiflora, foliis cuneatis supernè serratis, capitulis conicis, caule herbaceo repente.

Zappania nodiflora. *Brown prodr.* 1. p. 514. *Pursh fl. amer.* 2. p. 417. *Poiret in Lam. dict.* 8. p. 839.

Verbena nodiflora. *Linn. sp. pl.* 1. p. 28. *fl. zeyl.* p. 399. *Willd. sp. pl.* 1. p. 117. *Swartz obs.* p. 17. *Ait. hort. kew.* 4. p. 39.

V. foliis verticaliter ovatis, spicis globosis. *Linn. hort. cliff.* p. 11.

V. foliis verticaliter ovatis, spicis solitariis ovatis. *Roy. lucid.* p. 327.

V. caule repente, foliis oblongis supernè crenatis, pedunculis solitariis capitatis. *Gron. virg.* p. 7.

V. nodiflora repens, foliis obovatis supernè crenatis, pedunculis longis solitariis, floribus conglobatis. *Brown jam.* p. 116.

V. nodiflora, foliis minoribus viridibus. *Moris. hist.* 3. p. 419. *sect.* 11. t. 25. f. 8.

g. rosea, floribus roseis, fauce corollæ aureo.

Verbena nodiflora. *Smith fl. græc. Sibth. t.* 553.

V. nodiflora, capite oblongo. *Barr. ic.* t. 855.

V. nodiflora. *Bauh. pin.* p. 269. *hist.* 3. p. 444.

Sherardia repens nodiflora. *Vaill. sex.* p. 49.

Plant perennial, creeping, forming a close flat patch, resembling a good deal in habit *Veronica officinalis*, clothed with very short, adpressed silky hairs. *Roots* long, white, about the thickness of ordinary packthread, and slightly branched. *Stems* round, knotty, creeping, scarcely a span long. *Leaves* opposite, stalked, cuneately ovate, coriaceous, veinless, about half an inch long, toothed at the apex, entire, and attenuated towards the base. *Footstalks* scarcely half the length of the leaves, channelled above. *Peduncles* axillary, solitary, erect, cylindrical, an inch long, rather thicker at the apex. *Spike* capitate, rounded, scarcely half an inch long. *Bractes* ovate mucronate, bluntly keeled, silky, green, closely imbricated. *Calyx* pale green, membranous, compressed, transversely bilabiate, or rather 2-valved, valves collateral, with a fringed

keel; the lobes very short, blunt, entire, or obliquely notched, purple. *Corolla* pink, furnished at the mouth with an orange spot, which is deeply notched in front; the tube double the length of the calyx, paler than the limb, smooth both within and without, widened and compressed at the apex; *limb* 5-lobed, somewhat bilabiate; *lobes* rounded, entire, the 2 upper ones connivent, and much smaller; the lower one larger, reniform, truncate. *Stamens* 4, didynamous, inserted in the mouth of the tube. *Filaments* very short, compressed, smooth. *Anthers* yellow, bilocular, the cells unequal, inserted obliquely into the margin of a rather broad, white, notched connectivum. *Ovarium* bilocular. *Style* round, rather robust, very short, smooth, simple at the apex. *Stigma* peltate, slightly 2-lobed, viscid, yellow.

Like many other maritime plants, this is found in most parts of the world. In Europe, it extends northward to about the 40th degree; but, in America, its northern limits are considerably within that line. The plant represented in our plate, was introduced from Chile, by Mr. Hugh Cuming; but we cannot perceive any essential difference between it and the variety figured in *Flora Græca*, and by Barrelier, which is distinguished from the other variety by its larger pink flowers.

The plant is perennial, with creeping stems, forming a compact patch, which, when in flower, has a very pretty effect, being then adorned with innumerable heads of pink blossoms, marked with a yellow spot. It is nearly, if not quite, hardy; and is highly ornamental, whether kept in pots, or planted in a rock-work. A mixture of sandy peat and loam will be found to suit it well; and it is easily increased by slips, for almost every branch is supplied with roots. Named by Scopoli, after Paul Anthony Zappa, an Italian Botanist, to whom the public garden at Pavia was indebted for many valuable communications.

Our drawing was derived from Mr. Knight's collection, in July last. *D. Don.*



1. Bracte. 2. Calyx. 3. Corolla laid open. 4. Pistil.





1986

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Due to 2 days by Tuesday Feb 1 1854



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FABAGO major.

Greater Bean Caper.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. ZYGOPHYLLÉE. *Brown gen. rem.* p. 645. *Decand. prodr.* 1. p. 705.

FABAGO. *Calyx* 5-phyllus, æstivatione imbricatâ. *Petala* 5. *Stamina* 10. *Filamenta* basi intus appendiculata. *Stigma* indivisum. *Capsula* prismatica v. 5-alata, 5-locularis, 5-valvis: *loculis* polyspermis. *Semina* duplici ordine medio inserta, compressa: *testâ* crustaceâ, fragili: *albumen* nullum. *Radix* teretiuscula, curvata, ab umbilico externo remota, supera.

Herbæ (Asiæ et Africæ boreal.) *perennes*. *Folia petiolata, ternata, foliolo terminali plerumque abortivo, v. pinnata*. *Stipulæ membranacæ, persistentes*. *Flores axillares, solitarii v. gemini*. Huc forsitan referenda *Z. pterocarpum*, *Melongena*, *subtrijugum* et *furcatum*, *Ledeb. fl. alt.* D. Don *Man.*

F. major, foliolis conjugatis obovatis, pedunculis petiolo brevioribus, capsulis prismaticis elongatis, seminibus lævibus subbaccatis.

Zygophyllum Fabago. *Linn. sp. pl.* 1. p. 385. *Hort. ups.* p. 103. *Willd. sp. pl.* 2. p. 580. *Lam. ill.* 345. f. 1. *Ait. hort. kew.* ed. 2. 3. p. 40. *Perron synop.* 1. p. 469. *Marich. à Bieb. fl. taur. cauc.* 1. p. 310. *Decand. prodr.* 1. p. 705. *Ledeb. fl. alt.* 2. p. 105. *G. Don gen. syst. gard. and bot.* 1. p. 771.

Fabago Belgarum, sive *Peplus* Parisiensium. *Dalech. hist.* p. 456. (cum figurâ bonâ.) *Tournef. inst.* 1. p. 259.

Capparis Fabaginea, sive *Peplos* Lutetiorum. *Bauh. hist.* 2. p. 66.

C. Portulacæ folio. *Bauh. pin.* p. 480.

C. Fabago. *Dodon. pempt.* p. 747. *Ger. em.* p. 897. *Best. syst. æstiv.* 10. t. 1. f. 1. (mala.)

C. leguminosa. *Lob. ic.* 2. t. 5. (pessima.)

Telephium Dioscoridis. *Cotuma. ephr.* p. 132. t. 131. (bona.)

Morgesani. *Ramw. it.* t. 113.

The whole herb smooth, and of a deep green, with the smell and taste of *Capparis spinosa*. *Root* perennial, long, fusiform, white. *Stem* erect, divaricately branched, round and jointed, the joints swollen. *Branches* spreading, semi-cylindrical, the inner surface flat and channelled. *Leaflets* in a single pair, obovate, or obovate-oblong, entire, fleshy, with unequal sides, from an inch to 3 inches long, -ribbed beneath, the veins mostly immersed and invisible; the terminal one nearly abortive, narrow, bristle-shaped, membranous, but, occasionally, in the lower leaves, it is large and obcordate. *Petioles* linear, bluntly keeled below, channelled above, the edges slightly winged, from half an inch to an

inch long. *Stipules* ovate, acute, membranous, persistent. *Flowers* stalked, drooping, axillary, or issuing from the forks of the branches, solitary, or in pairs, sometimes terminating the branches, and then somewhat corymbose. *Peduncles* angular, glabrous, about half an inch long, thickened at the apex. *Calyx* 5-parted, segments oval, obtuse, concave, imbricate in æstivation, the border white, thin, membranous, and slightly torn. *Petals* 5, alternating with and longer than the segments of the calyx, obovate, unguiculate, whitish and torn at the top, the rest of a saffron-colour, and dotted. *Stamens* 10, perigynous. *Filaments* awl-shaped, of a deep saffron-colour, with the points white and attenuated, furnished at their inner base with a flat, linear, saffron-coloured appendage, torn at the top, and about half their length. *Anthers* incumbent, oblong-cordate, mucronulate, of a rich saffron-colour, composed of two parallel connate cells, opening lengthways. *Gynobase* fleshy, depressed, and flattened. *Ovarium* 5-sided, 5-celled, about an inch long. *Style* shorter than the ovary, awl-shaped, white. *Stigma* very small, blunt. *Ovula* oblong, compressed, inserted in an alternate order, along the margin of the placentæ, which are 5 in number, very narrow, almost filiform, formed by the thickening of the inner edge of the Septa.

This is a very old inhabitant of our gardens, having been cultivated by Gerard, in 1596, but it is still by no means common. It appears to delight in a gravelly loam, and, if properly treated, produces an abundance of flowers, which are both curious and pretty. It is perennial, and quite hardy; and may be increased by division, or by seeds.

Our drawing was taken in July last, at the Botanic Garden, Chelsea, where the plant being favourably placed at the foot of the rock-work, near the edge of a gravel walk, had attained the height of 4 feet, and was then clothed with blossoms.

We willingly follow Mr. Brown in separating this from *Zygophyllum*, from which it is distinguished by several important characters, especially by the position of the radicle, with respect to the hilum. In *Z. macropterum* of Ledebour, the latter character is still more remarkable. This species, which had been named by the illustrious Pallas, *Zygophyllum songaricum*, may be distinguished by the following characters:—

F. macroptera, foliis pinnatis, capsulis 5-alatis, seminibus angulatis scabris. The appendages in this and in several other genera of this family, are not to be regarded as a distinct set of organs, but as forming an integral part of the stamina, and exhibiting their partial change from petals. The natural place of the *Zygophylleæ* is clearly between *Rutaceæ* and *Oxalidæ*, to both of which they are related in a nearly equal degree.

The generic name is derived from *Faba*, a bean, meaning a plant resembling the bean, which this does in its leaves. *D. Don.*



1. Sepal. 2. Petal. 3. Two Stamens, with their appendages. 4. Pistil.





CALCEOLÁRIA arachnoidea; *var.*
refulgens.

Refulgent Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.
Natural Order. SCROPHULARINÆ.—Trib. V. CALCEOLARIÆ.
CALCEOLARIA. Supra fol. 220.

- C. arachnoidea*, niveo-lanata; foliis oblongo-spathulatis dentatis integerrimisve, floribus cymosis, corollæ labio inferiore orbiculato inflato, ovario styloque glabris.
Calceolaria arachnoidea. *Graham in edinb. phil. journ.* 1828, p. 572. *in bot. mag. t.* 2874. *Lindl. in bot. reg. t.* 1454.
2. refulgens, parcius lanuginosa; foliis ovatis duplicato-serratis, floribus rufescenti-sanguineis.
-

The whole plant sparingly clothed with soft, intricate, woolly hairs. *Root* perennial, fibrous. *Stem* from a span to a foot high, erect, doubly-forked, round, hollow, purple. *Branches* spreading, filiform. *Leaves*, the radical ones ovate, doubly and coarsely serrated, on winged footstalks, ribbed underneath, and wrinkled above, 3 inches long, and 2 broad. *Flowers* cymose, of a bright rufous red. *Pedicels* slender, filiform, woolly, like the calyx; the segments of the latter broadly ovate, acute. *Corolla*, the upper lip very short, convex, entire; lower one large, inflated, nearly round, entire. *Stamens* 2. *Anthers* pale yellow. *Ovary* conical, rather shorter than the style, both quite smooth. *Stigma* truncate, pruinose.

This showy production was raised by Mr. Gillen, Gardener to Mr. M'Intosh, at the East India Docks, by cross impregnation with two of the numerous varieties, originated between *C. arachnoidea*, and *corymbosa*. Mr. Gillen sent us specimens of several others equally beautiful, which had been raised by him in the same way. A light rich earth suits

these plants best ; and the particular varieties can only be increased by slips from the original stock.

For the explanation of the generic name, see fol. 220.



1. Portion of the Corolla, bearing the Stamens.

these plants best ; and the particular varieties can only be increased by slips from the original stock.

For the explanation of the generic name, see fol. 220.



1. Portion of the Corolla, bearing the Stamens.





PERICALLIS *Tussilaginis.*

Colt's-foot-leaved Pericallis.

Linnean Class and Order. SYNGENESIA POLYGAMIA SU-
PERFLUA.

Natural Order. COMPOSITE. *Adans. fam. 2. p. 103.*

Fam. VIII. SENECEIONÆ. Cass. in Journ. phys. 82. p. 131.

PERICALLIS. *Involucrum* simplici ordine multipartitum, æquale, basi dilatatum, omnino ebracteolatum. *Receptaculum* planum, dilatatum, scrobiculatum. *Flosculi* radii ligulati, feminei, uniseriales; *disci* hermaphroditi, tubulosi, 5-dentati: *styli* ramis compressis, apicè truncatis papillo-
sis. *Anthera* coalitæ, basi muticæ, appendiculâ membranaceâ coronatæ, *Achenia* erostris, sulcata; in radio compressiuscula, glabra; in disco subte-
retia, undique papilloso-micantia. *Pappus* capillaris: radiis duplici or-
dine digestis, denticulis scabris, basi solutis, caducis, in flosculo femineo
paucrioribus mox evanidis.

Herbæ v. suffrutices (*Ins. Canar.*) *foliis cordatis, capitulis corymbois, radio plerumque purpureo.*

Obs. Genus bene naturale, habitu *Tussilaginis*, involucri *Othonnæ*, corollâ *Senecionis*. *D. Don Mus.*

P. Tussilaginis, foliis cordatis angulatis subtus tomentosis, petiolis basi auritis, capitulis corymboso-paniculatis.

Cineraria Tussilaginis. L'Herit. vert. angl. p. 26. Willd. sp. pl. 3. p. 2078.

Persoon syn. 2. p. 439. Spreng. syst. 3. p. 548.

Senecio Tussilaginis. Lindl. in bot. reg. t. 1550.

Root fibrous. **Stems** about a foot high, upright, branched, round, solid, striated, becoming quite smooth. **Leaves** cor-
date, stalked, angular, sharply toothed, ribbed, green, and hairy above, white and woolly beneath; those of the stem rather oblong, acuminate, sharply toothed, 2 or 3 inches in length; upper ones clasping the stem; the uppermost ovate, acuminate, cucullate, membranous, purplish. **Capitula** num-
erous, in a corymbose panicle. **Peduncles** round, clavate, nearly glabrous, furnished with a few lanceolate, acuminate, adpressed, membranous bractes. **Involucrum** simple, mul-
tipartite, smooth, with a broad, flattened, naked base; the segments lanceolate, acuminate, arranged in a single series, connivent, equal, smooth, with a membranous border, partly stained with purple. **Receptacle** flat, slightly pitted. **Flo-
rets of the ray** from 12 to 13, disposed in a single series, fe-

male, ligulate, bluntly 5-toothed, somewhat coriaceous, and rather stiff, of a rich lilac above, whitish beneath, about half an inch long, with 5 primary nerves, and 5 distinct recurrent branches, the tube narrow, slightly compressed, smooth; those of the disk hermaphrodite, tubular, 5-toothed, teeth connivent, of a pale orange, the tube cylindrical, white, longer than the faux. *Filaments* capillary, smooth, the upper joint broad, ovate. *Anthers* united, naked at the base, and crowned by an oblong, blunt, membranous appendage. *Style* slender, filiform, smooth, hardly thickened at the base, the branches in the ray florets semi-cylindrical, blunt, recurved, glabrous; in those of the disk linear, compressed, with a truncate papillose apex. *Achenia* furrowed, those in the ray slightly compressed, glabrous; in the disk, nearly cylindrical, and thickly beset with shining papillæ. *Pappus* capillary, white, the rays disposed in a double series, rough, with minute teeth, caducous, those of the female florets much fewer in number, and falling off before the expansion of the flower.

A highly ornamental plant, native of Teneriffe, whence it was introduced, some years ago, by Mr. Webb. Our drawing was taken from a specimen which blossomed in the late Mr. Barclay's collection, at Bury Hill. It is usually regarded as an annual, but, if kept in the greenhouse during Winter, I have no doubt of its surviving for several years. It is readily increased by seeds, and appears to grow freely in almost any soil.

This, together with *Cineraria cruenta*, *aurita*, *lactea*, *lanata*, *multiflora*, *populifolia*, and *malvæfolia*, all natives of the Canary Islands, having a simple multipartite involucre, naked at the base, analogous to that of *Othonna*, and agreeing remarkably in their habit and geographical distribution, constitute, in my opinion, as natural and well-defined a group as any in the whole family to which they belong.

The generic name is derived from *περικαλλης*, pretty, and alludes to the beautiful ray blossoms. *D. Don.*







ROSA indica; var. nivea.*White Noisette Rose.**Linnean Class and Order.* ICOSANDRIA POLYGYNIA.*Natural Order.* ROSACEÆ. *Juss. gen.* p. 334.*ROSA.* *Supra fol.* 158.

- R. indica*, foliolis ellipticis acuminatis glabris crenato-serratis subtus glaucis, ovarius 40-50. *Lindl. monogr.* p. 106.
Rosa indica. *Linna. sp. pl.* p. 705. *Lawr. ros. t.* 23. *Willd. sp. pl.* 2. p. 1079. *Ait. hort. kew. ed. 2.* p. 268. *Redout. ros. 1. t.* 14. *et 2. t.* 15. *Decand. prodr.* 2. p. 600.
R. nivea, foliolis glabris nitidis, floribus copiose corymbosis plenis niveis.

Stem erect, from 2 to 3 feet high, sparingly armed with hooked prickles, dilated at the base. *Branches* round, smooth and purplish. *Leaflets* from 5 to 7, ovate, acute, equally serrated, with rather adpressed teeth, tipped with a dark-red gland, rounded, and rather oblique at the base, smooth and shining on both sides, but especially beneath, convex and bright green above; midrib and veins mostly smooth. *Footstalks* and *Rachis* narrow, semi-cylindrical, pubescent, and copiously furnished with stalked glands, and, occasionally armed with a few short hooked prickles. *Stipules* narrow, lanceolate, acuminate, bordered by stalked glands. *Flowers* copious, corymbose, snow-white, the petals very full, and rather crumpled, the outer ones and buds of a deep red colour. *Peduncles* filiform, straight, minutely pubescent, as well as the tube of the calyx, which is pear-shaped, thickly dotted, and of a glaucous hue, with ovate, acuminate segments, woolly at the edges.

For the opportunity of publishing a figure of this very handsome Rose, we are indebted to Mr. Dennis, in whose Nursery, at Chelsea, it flowered in July last. It had been imported by him from France, under the name of *Amie Vibert*, and is, doubtless, a hybrid production; most probably originated between *Rosa indica* and *moschata*. It requires a rich

loamy soil, is increased by cuttings, and requires the same treatment as the common Noisette Rose. It is an extremely free flowerer, often bearing from 40 to 50 blossoms in a cluster, and on account of most of the young shoots running to flower, cuttings are obtained with difficulty.

The generic name is already explained at fol. 158.







1. Flower 2. Flower bud 3. Flower bud 4. Flower bud 5. Flower bud

ADESMIA viscosa.*Clammy Adesmia.**Linnean Class and Order.* DECANDRIA MONOGYNIA.*Natural Order.* LEGUMINOSÆ. *Juss. gen. p.* 345.*ADESMIA.* *Supra fol.* 222.

A. viscosa, fruticosa, inermis, glanduloso-viscosa; foliis multijugis cuneato-oblongis crenatis! calycibus acuminatis, lomentis 4-6-articulatis pubescentibus glandulosis.

Adesmia viscosa. *Gill. Mss. Hook. and Arnott in bot. misc. 3. p.* 192.

A slender, upright, branched, unarmed, clammy shrub, rising to the height of 2 or 3 feet, studded with numerous tubercular shining glands, with filiform twiggy branches. *Leaves* copious, abruptly pinnate, on short footstalks, composed of from 9 to 14 pair of cuneately-oblong, crenate, coriaceous, nearly sessile leaflets, of a deep green colour, and void of hairs, about 2 lines long. *Stipules* lanceolate, obtuse, glandular, persistent. *Racemes* terminal, solitary, many-flowered, erect. *Pedicels* about half an inch long, filiform, straight, afterwards becoming bent, copiously glandular. *Bractes* oblong, obtuse, concave, persistent. *Calyx* campanulate, slightly pubescent, deciduous, with 5 lanceolate, pointed, nearly equal teeth. *Corolla* papilionaceous, of the colour of gamboge, larger than is ordinarily found in the genus; vexillum broad, rounded-ovate, spreading, veiny, fringed at the base; wings somewhat dolabriform, rounded at the top, semi-cordate, and naked at the base, of a rich yellow, approaching to orange; keel longer than the wings, hollow, ventricose, blunt, and notched at the apex, the suture below bursting with downy edges. *Stamens* 10, five shorter than the rest. *Filaments* free, awl-shaped, white, smooth, broader, and membranous towards the base. *Anthers* round, yellow. *Ovary* thickly clothed with adpressed hairs. *Style* slender, compressed, the upper half attenuated and silky, quite smooth. *Stigma* compressed, nearly orbicular, pruinose. *Pod* composed of 4 or 6 semi-orbicular, compressed, one-seeded

joints, slightly pubescent, and furnished with numerous elevated dark-coloured glands.

Another interesting addition to the cultivated species of *Adesmia*, of which one has already been given in a late number. The present is, perhaps, entitled to be regarded as the most showy of the whole genus, the flowers being double the size of those of most of the other species, and of a rich gamboge yellow. It forms a small shrub, and is copiously studded with glands, which give out, especially in the dried state, an agreeable balsamic odour. The toothed leaves is a remarkable character among the *Leguminosæ*, although not confined to this species.

Chile, which is singularly rich in the species of this diversified genus, is also the native country of the one now before us, which was raised from seeds received from that country in 1832, by Messrs. Allan and Rogers, in whose Nursery, at Battersea, it flowered in August last.

The plant succeeds best in a light loamy soil, and may be increased by cuttings, or by seeds. It requires the protection of a pit, or frame, in Winter.

The generic name will be found explained at fol. 222. *D. Don.*



1. Calyx and Pistil. 2. Vexillum. 3. Wing. 4. Keel. 5. Stamens.





DIANTHUS Libanotis.

*Lebanon Pink.**Linnean Class and Order.* DECANDRIA DIGYNIA.*Natural Order.* CARYOPHYLLÆ. *Juss. gen. p. 299.*

DIANTHUS. Calyx tubulosus, 5-dentatus, basi squamis bracteolatus. Petala 5, unguiculata, exappendiculata. Stamina 10. Styli 2. Capsula teres, 1-locularis, apice dentibus 4 v. 5 dehiscens. Semina compressa. Embryo rectus, subfoliaceus.

Herbæ v. suffrutices (plerumque Europæ australis.) Folia sæpius angusta. Flores terminales, aggregati, aut solitarii. D. Don Mes.

D. *Libanotis*, bracteis indefinitis imbricatis squarrosis, dentibus calycinis subulatis, petalis multifidis barbatis: unguibus anticè carinatis.

Dianthus Libanotis. Labill. pl. syr. 1. p. 14. t. 5. Decand. prodr. 1. p. 365.

Lindl. in bot. reg. t. 1548. G. Don. gen. syst. gard. and bot. 1. p. 396.

Herb glaucous. *Stem* erect, much branched, the joints thickened. *Leaves* linear, mucronate, channelled, recurved, and spreading, the margins blunt and smooth, but broadly membranous towards the base. *Calyx* tubular, striated, 2 inches long, with 5 upright, sharp-pointed, membranous teeth. *Bractes* from 4 to 7, lanceolate, mucronate, recurved, and spreading, an inch long, with broad, membranous, imbricate bases. *Petals* with long linear claws, having an elevated keel, of a greenish white, the lamina cuneate, pubescent above, divided in innumerable very narrow segments; the ground white, marked above with small irregular purple spots. *Filaments* awl-shaped, white. *Anthers* incumbent, with parallel cells. *Styles* semi-cylindrical, rather shorter than the stamens, attenuated upwards. *Stigmas* erect, twisted, bearded along the inner surface. *Ovary* about half an inch long, pale green, with a free, central, fleshy placenta. *Ovula* arranged in 2 compact rows.

This rare and very distinct species was discovered on the lofty mountains of Lebanon, by Labillardière, who has given a very faithful representation of it in his *Icones Plantarum Syriæ Rariorum*. The number, size, and form of the bractes, essentially distinguish it from every other species.

Our drawing was taken from a plant, almost the only one yet in cultivation ; raised in 1831, from seeds received by Mr. Lambert, from Dr. Fischer, of the Imperial Botanic Garden, at St. Petersburg, and which blossomed at Boyton, in August last.

The plant is a hardy perennial, growing well in a light loamy soil, and is sparingly increased by cuttings. To its late period of flowering is most probably to be attributed the circumstance of its never having yet perfected seeds in cultivation.

The Greek name *Dianthus*, bears the same meaning as the Latin *flos Jovis*, and is compounded of *θεος*, God, and *ανθος*, a flower, literally divine flower, so termed on account of the extreme beauty of the flowers. *D. Don.*



1. Calyx laid open. 2. Stamens and Pistil.





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SOLLYA heterophylla.

Various-leaved Sollya.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. PITTOSPOREÆ. *Brown gen. rem. in Flind. voy. 2. p. 542. Decand. prodr. 1. p. 345.*

SOLLYA. *Calyx* 5-phyllus. *Petala* 5, patentia. *Antheræ* apice biforaminulosæ. *Stigma* bilobum. *Pericarpium* capsulare, membranaceum, biloculare, polyspermum.

Frutices (australasici.) Flores corymbosi, aurei. D. Don Mss.

S. heterophylla, foliis oblongis, antheris conniventibus, ovario sericeo, caule volubili.

Sollya heterophylla. *Lindl. in bot. reg. t. 1466.*

Billardiera fusiformis. *Labill. nov. holl. 1. p. 65, t. 90.* (affirmante exemplario prototypo ab auctore misso in Herb. Lamb.) *Decand. l. c. 1. p. 345.*

A slender, twining, branching, evergreen shrub, rising to the height of 3 or 6 feet. *Branches* filiform, glabrous. *Leaves* copious, alternate, stalked, obliquely horizontal, elliptical-oblong, or lanceolate, acute, or abruptly mucronulate, cartilaginous and membranous, quite entire, smooth on both sides, dark green, and shining above, paler and veiny beneath, from an inch and a half to 3 inches long; those of the branches for the most part narrower, and abruptly mucronulate, sparingly hairy in the young state. *Petioles* very short, twisted, channelled above. *Corymbs* solitary, drooping, of from 3 to 9 flowers, but most frequently of 5, at first terminal, but by the prolongation of the shoots, afterwards becoming lateral. *Peduncles* filiform, half an inch long, stained with violet, rather thicker at the apex, covered sparingly with resinous dots, furnished at the base with a lanceolate, acuminate, violet-coloured, caducous bracte. *Calyx* of 5 lanceolate, acuminate, nearly equal violet-coloured leaves, imbricate in æstivation, furnished with a membranous border and 3 nerves, the centre one of which is thicker and prominent. *Petals* 5, spreading, alternating with the leaves of the calyx, obovate, with an almost obsolete point, and 3 nerves, veiny, of a brilliant azure above; paler and whiteish beneath, having a very short yellow claw. *Stamens* 5, alternating with

the petals. *Filaments* green, nearly cylindrical above, with a broad, flat, cuneiform base. *Anthers* longer than the filaments, connivent, cohering at the apex, and close pressed to the style, linear, 2-celled, inserted by their base; the cells narrow, marginal, free, diverging, and obtuse at the base, narrower and paler towards the top, opening by 2 terminal foramina, finally bursting longitudinally, with the connectivum extending beyond them into a concave truncate appendage. *Ovarium* fusiform, marked with 10 elevated lines, silky, bilocular, with 2 prominent placentæ. *Style* compressed, about half the length of the ovarium. *Stigma* composed of 2 broad, rounded, concave, minutely papillose lobes, bearing in the ripe state, a drop of a clear fluid.

This truly handsome evergreen twining shrub, is a native of Van Diemen's Land, where it was originally detected by Labillardière, who has given a figure and description of it in his work on the plants of New Holland. The figure, which is by no means a characteristic one, induced Dr. Lindley to believe it different from the subject of the present article; but the examination of specimens from the author himself, has established their identity beyond all question.

Although usually treated as a greenhouse plant, it proves to be nearly hardy; and when planted against a wall, with a favourable aspect, it will be found to thrive even more vigourously, than if kept in the conservatory. The one in Mr. Knight's Nursery, whence our drawing was taken, is placed against the west wall of one of the houses, where it has attained the height of 6 feet, and is annually adorned, during the Summer and Autumn months, with a profusion of its brilliant azure blossoms. It requires a soil composed of peat and loam, and is readily increased by cuttings.

The serrated leaves, noticed by Dr. Lindley, if not accidental, constitute a remarkable anomaly in this order, which we should scarcely have looked for from the confluent arrangement of the secondary corsæ.

The genus, which is essentially distinguished from *Bilardiera*, by its spreading petals and capsular fruit, was named by Dr. Lindley, after Richard Horsman Solly, Esq., F.R.S. and L.S., &c., who has well merited the compliment, by his knowledge of vegetable physiology, and by his active promotion of science in general. *D. Don.*



1. Organs of reproduction. 2. Stamen separate. 3. Pistil.





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NIEREMBÉRGIA intermèdia.

Narrow-leaved Purple Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANÆ. *Brown prodr.* 1. p. 443.

NIEREMBERGIA. *Suprà fol.* 172.

Sect. 2. *Corollæ faucē dilatatā sæpiùs ventricosā, staminibus inæqualibus tubo medio insertis subinclusis, stigmate subcapitato.* Petunia.

N. intermedia, foliis linearibus obtusis densè pubescentibus, corollæ tubo vix calyce longiore: laciniis emarginatis, stylo clavato, capsulâ 5-costatâ.

Nierembergia intermedia. *Graham in edinb. phil. journ.* 1833.

Salpiglossis linearis. *Hooker in bot. mag. t.* 3258.

Plant somewhat shrubby, thickly clothed with very short, glandular, clammy, and hoary pubescence. *Stems* erect, much branched, round, and leafy, from a span to a foot high. *Leaves* alternate, or often fasciculate from the undeveloped branches, sessile, linear-spathulate, or oblong, blunt, entire, recurved and spreading, about half an inch long, concave above, convex but scarcely carinate beneath. *Flowers* copious, situated opposite the leaves. *Peduncles* an inch long, filiform, afterwards becoming bent down. *Calyx* campanulate, 5-sided, with 5 blunt, strap-shaped, spreading, unequal segments. *Corolla* funnel-shaped, scarcely an inch long, copiously clothed with glandular pubescence; tube yellow, striated, hardly longer than the calyx; throat ventricose, yellow within; limb plaited, 5-lobed, of a rich purple, paler and veiny towards the border, the centre of a deeper colour, with a slight shade of brown; the lobes are very short, rounded and emarginate. *Stamens* 5, all fertile, inclosed, declinate, unequal, the fifth very short, straight, erect, placed between the longer pair. *Filaments* awl-shaped, mostly bent, glabrous, or slightly glandular, pale green, attenuated towards the top, thickened and connivent at the base, where they are attached to the tube. *Anthers* yellow, reniform, bilocular, cells connate at the middle, free at both ends, and

opening lengthways. *Ovarium* ovate, angular, bilocular, surrounded at the base by a slightly lobed, fleshy ring. *Style* clavate, slightly compressed, glabrous, attenuated at the base. *Stigma* compressed, blunt, slightly 2-lobed, viscid, the lobes connate, revolute at the margin. *Capsule* rounded, ovate, bilocular, with five prominent ribs. *Placentæ* 2, fungous, pitted, attached to the partition. *Seeds* when mature, few in each cell, round, rough, with elevated dots. *Testa* brown, crustaceous. *Albumen* copious, fleshy, white. *Embryo* small, slightly curved.

A native of sandy plains near the banks of the Parana, where it was discovered by Mr. Tweedie, and from seeds transmitted by that enterprising collector, in 1832, to our highly valued friend, Mr. Neill, a single individual, was raised in the collection at Canonmills, where our drawing was taken in September last. As the plant is found to produce seeds much more freely than the other species, and to be readily increased by cuttings, we hope soon to see it a common ornament of the flower border, to which its graceful habit, and successive profusion of blossoms of the deepest purple, shaded partly with brown, and of a rich velvety hue, cannot fail to render it a most welcome addition. It appears to be quite as hardy as the *phœnicia*, given in the preceding volume, and is found to thrive best in a mixture of peat and river sand.

For the explanation of the generic name, see folio 172.
D. Don.



1. A Flower with the Corolla removed. 2. Pistil. 3. Transverse Section of the Ovarium.



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PÆONIA Moutan; var. variegata.

Party-coloured Tree Pæony.

Linnean Class and Order. POLYANDRIA DIGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen. p.* 231.

PÆONIA. *Calyx* 5-sepalus foliaceus inæqualis. *Petala* 5-10 sub-orbiculata. *Stamina* indefinita. *Discus* carnosus ovaria cingens. *Carpella* 2-5 grossa stigmatibus bilamellatis crassis instructa, in folliculos capsulares conversa. *Semina* subglobosa, nitida.

Radices fasciculatae. Folia caulina biternatim secta. Flores amplè albi aut purpurascens. *Decand. prodr.* 1. p. 65.

P. Moutan, caule fruticoso, foliolis summo apice trifidis, germinibus tomentosis urceolo membranaceo inclusis. *Anderson in linn. trans.* 12. p. 252.

Pæonia Moutan. *Hort. kew. ed. II. v. 3. p.* 315. *Sims in bot. mag. t.* 1154. *Smith in Rees' cyclop. in loco. Bonpl. nav. p. 1. t. 1. Decand. syst. 1. p.* 387. *prodr.* 1. p. 65.

P. officinalis. *Thunb. fl. jap. p.* 230. (ex parte).

variegata, floribus 10-petalis patulis, petalis albo-roseis basi intensè lilacinis, caule vix sesquipedali.

This is a low growing bushy plant, branching from the ground, and scarcely woody. The stems, although they rarely exceed a foot or 18 inches in height, bear commonly not less than five flowers. *Leaves* tritermately parted, with ovate-oblong acuminate segments, of a greener hue than is met with in the other varieties of this species; the terminal ones mostly 3-lobed. *Flowers* large and showy, of seldom more than 10 petals, and when fully expanded about 6 inches across. *Petals* broadly wedge-shaped, veiny and lobed at the upper edge, the ground white, stained of a deep rose colour in various parts, the base marked with numerous radiating streaks of violet and purple. *Stamens* numerous, apparently fertile. *Filaments* purple. *Anthers* yellow. *Pistils* dark red.

The Earl of Mountnorris, whose successful culture of the tree Pæony, has been rewarded by the production of several splendid varieties far excelling any of those imported from China, was so fortunate also as to raise the present fine variety,

which is remarkable for its dwarf and almost herbaceous habit. It was raised from seeds of the *papaveracea*, which his Lordship supposes had been accidentally fertilized by some of the herbaceous species. All the varieties raised at Arley, were from *papaveracea*, and not from *Banksii*, as the gardener had inadvertently stated. The *papaveracea* appears to be really the normal form of the species, as the late Mr. George Anderson suggested. The tree Pæonies are propagated by layers, which should be twisted a little, and the soil best adapted for them is a mixture of vegetable earth and fresh meadow loam.

For an account of the other varieties of the tree Pæony, we refer our readers to Mr. Sabine's elaborate paper in the sixth volume of the Transactions of the Horticultural Society.

The generic name is derived, according to some, from *Pæon*, a noted physician of antiquity; and by others, which is much the most probable, from *Pæonia*, a mountainous country of Macedonia, where some of the species grow wild.
D. Don.







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- 13 -

NYCTERINIA Lychnidea.

White-flowered Nycterinia.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 483.

Trib. IV. BUCHNEREÆ. Nobis.

NYCTERINIA. *Calyx* tubulosus, 5-dentatus, sub-bilabiatus, sinus membranaceus. *Corolla* hypocrateriformis: *tubo* longissimo, filiformi: *faucis* coarctatâ, glanduloso-pilosâ: *limbo* 5-partito, patulo. *Stamina* 4, didynama, fauci corollæ inserta: *filamenta* compressa, glabra, brevissima: *antheræ* lineares, unilobæ, bivalves, longitudinaliter dehiscentes, connectivo insigni carinato viridi insertæ; 2 *superiores* minores. *Ovarium* oblongum, teres, biloculare, basi glandulâ elevatâ auctum. *Stylus* filiformis, glaber. *Stigma* loriforme, revolutum, minutè papillosum. *Capsula* bilocularis. *Semina* minuta, creberrima.

Plantæ (capenses) *suffruticosæ, viscosæ*. *Folia opposita, indivisa*. *Flores terminales, corymboso-spicati, bracteati*.

Obs. Genus omninò diversum est *Erinus* (*E. alpinus*) calyce 5-partito æquali, staminibus tubo corollæ infra medium insertis inclusis, antheris bilobis reniformibus loculis apice confluentibus, stylo brevissimo, stigmate capitato viscoso biglanduloso. *Buchnera* staminibus infra medium tubi insertis, antheris bilobis mucronatis, stigmate clavato emarginato, calyce æqualiter 5-dentato faciliè distinguitur. *D. Don Mss.*

N. Lychnidea, foliis lineari-oblongis dentatis, limbi laciniis semibifidis.

Erinus Lychnidea. *Linn. suppl.* p. 287. (excluso synonymo). *Thunb. prodr.* p. 102. *Willd. sp. pl.* 3. p. 333. *Persoon syn.* 2. p. 147. (excl. syn. *Burm.*) *Lindl. in bot. reg.* t. 748.

The whole plant of a dark green, clothed with recumbent bristly hairs, and yielding a glutinous substance resembling, in appearance and odour, gum ladanum. *Stem* suffruticose, erect, cylindrical, branched, rigid, from 3 to 6 inches high. *Leaves* opposite, sessile, linear, obtuse, about an inch long, revolute at the edge, furnished with several blunt teeth, rather hoary beneath. *Flowers* terminal, spiked, expanding only in the evening, or in cloudy weather, and then very fragrant. *Bractes* leafy, oblong, blunt, even, fringed, entire or toothed. *Calyx* tubular, membranous, very pale green, almost white, hairy, cloven lengthways, and somewhat bilabiate, with 5 short, blunt, erect, fringed teeth. *Corolla*, the tube filiform, an inch or an inch and a half long, of a livid purple; faux contracted, hairy and glandular; limb deeply parted into 5 wedge-shaped, cloven segments, with divaricate, blunt, spathulate lobes, imbricate

in æstivation, above of a milk white, underneath of a livid purple. *Stamens* 4, didynamous, inserted in the mouth of the corolla. *Filaments* very short, compressed, glabrous. *Anthers* exserted, linear, 1-lobed, yellow, bursting lengthways, attached to a thick, carinate, green connectivum, the upper pair smaller. *Ovarium* oblong, cylindrical, bilocular, with numerous minute ovula closely packed on two placentaë. *Style* filiform, white, smooth. *Stigma* simple, long, linear, blunt, flat, loriform, revolute, copiously papillose, especially at the edges.

This forms a very pretty border flower during the Summer months, thriving in a mixture of sandy peat and loam, and is readily increased both by seeds and cuttings. A supply of the latter should be put in, in the Autumn, and kept in the greenhouse, or in the propagating pit, until the middle of May, when they are to be planted out in the open border. Its blossoms are very elegant, expanding only in the evening, or in cloudy weather, and they are then highly fragrant.

The genus is a very natural one, and is essentially distinguished from *Erinus* and *Buchnera* by the structure of the anthers and stigma, and by the insertion of the filaments. It will contain, besides the species now under consideration, *Erinus fragrans*, *tristis*, and *africanus*, of Linnæus, all natives of the Cape, and agreeing remarkably both in habit and structure.

Our drawing was taken in September last from a plant in the open border, in Mr. Neill's collection, at Canonmills, near Edinburgh.

The flowers of all the species expanding at night, the genus has very appropriately been named *Nycterinia*, from νυκτερινος, nocturnal. *D. Don.*



1. Stamens. 2. Pistil.





ALONSOA linearis.*Linear-leaved Alonsoa.**Linnean Class and Order.* DIDYNAMIA ANGIOSPERMIA.*Natural Order.* SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

ALONSOA. *Calyx* 5-partitus, æqualis, æstivatione valvatâ. *Corollæ* subrotata, 5-fida, irregularis, resupinata, æstivatione imbricatâ; *laciniis* sæpe majoribus. *Stamina* 4, didynama, declinata: *filamenta* teretia, glabra: *antheræ* approximatae, cordatae, biloculares: *loculis* apice confluentibus, æturâ continuâ dehiscentibus. *Stylus* filiformis, declinatus. *Stigma* capitatum. *Capsula* membranacea, bilocularis, apice dehiscens, polysperma: *alutis* apice bifidis. *Dissepimentum* e capsulae valvularum marginibus inflexis constitutum, contrarium. *Placenta* 2, oblongæ, fungosæ, processibus elevatis undique ornatae. *Semina* angulata, scabra.

Plantæ (peruvianæ) humiles, caule nunc suffruticoso. *Folia* opposita. *Flores* solitarii, pedunculati, in ramulorum apice racemosi, unibracteati. *Corolla* coccinea.

A. linearis, foliis linearibus integerrimis dentatisve.

Alonsoa linearis. Ruiz et Pavon syst. 1. p. 154. fl. peruv. et chil. v. 5. ined.

t. 503. f. b. Brown in hort. kew. 4. p. 27.

Salsia linearis. Jacq. coll. 2. p. 270. ic. 3. t. 497. Curt. bot. mag. t. 210.

Lemmeris coccinea. Willd. sp. pl. 3. p. 283. Persoon syn. 2. p. 162.

A dwarf, bushy, suffruticose plant, of a span or a foot high. *Branches* square, purple, perfectly glabrous, stiff and fragile. *Leaves* opposite, or in threes, mostly fasciculate, from the non-evolution of the axillary shoots, narrow, linear, pointed, or subulate, channelled above, of a dull green, an inch, or an inch and a half long, the points purple; lower ones longer and broader, and occasionally furnished with minute distant teeth; upper ones and those of the branchlets subulate, and quite entire. *Racemes* terminal, erect, few-flowered. *Bractes* subulate, entire. *Peduncles* longer than the bractes, quadrangular, half an inch long, copiously clothed with glandular pubescence. *Calyx* glandular, deeply parted into 5 lanceolate, acute segments, valvate in æstivation, the two upper ones rather broader. *Corolla* obliquely rotate, irregular, 5-lobed, lobes rounded, reniform, entire, the lower ones very small, sparingly glandular outside, scarlet, dark-red at the base. *Stamens* 4, inserted at the base of the tube, slightly declinate. *Filaments* stout, rounded, glabrous, pale yellow. *Anthers* cordate-oblong, obtuse, of a rich yellow, longer than the filaments, the cells confluent at the top, opening by a continuous fissure. *Ovarium* ovate-oblong, bilocular. *Style* declinate, filiform, glabrous, double

the length of the stamens. *Stigma* small, capitate, minutely papillose. *Capsulae* ovate-oblong, pointed, rather compressed, bilocular, opening at the top by two cloven valves. *Partition* transverse, formed by the inflected edges of the valves. *Placentae* 2, oblong, fungous, furnished with elevated processes. *Seeds* numerous, small, angular, scabrous.

Found by Ruiz and Pavon, growing in waste grounds, and by way sides, about Pillao, Panao, Chaclla, and other towns and villages of the provinces of Tarma, and Huassahuassi, in Peru, where it is known by the names of Ricaco and Ricarco, meaning mask-flower, and blossoming from May to September. One species of the genus is famed in Peru for its anodyne and stomachic properties.

The *Alonsoæ* are plants of very easy culture, and add much to the ornament of the flower borders during the Summer and Autumn months. They prefer a light loamy soil, and are easily increased by seeds or cuttings. A supply of young plants destined for the borders should be raised in the preceding Autumn, and planted out early in May.

The species here figured, which is certainly that of Ruiz and Pavon, although formerly a denizen of the gardens, having been first introduced in 1790, has now become rare, the *A. acutifolia* having usurped its place and name in most collections.

Our drawing was taken in August last, at the Botanic Garden, Chelsea, where the plant had been raised from seeds communicated by Mr. Hugh Cuming.

The genus is essentially distinguished from *Celsia* and *Hemimeris*, with both of which it has been confounded by several eminent Botanists, and we are inclined to think more nearly related to *Angelonia* and *Calceolaria* than to either of them. The corolla is that of *Calceolaria* in an expanded form, and its resupinate character appears to arise from the twisting of the peduncle in an early stage.

The genus was named by Ruiz and Pavon, after Don Zeno Alonso, Secretary to one of the Spanish Viceroy's of New Granada, and a zealous promoter of the publication of the *Flora Peruviana*. D. Don.



Correction in the Number for March.

Adesmia viscosa, fol. 230. This fine species was raised by Mr. Knight, from seeds collected in Chile, by Mr. Cuming. The drawing, which was taken at Mr. Knight's, during our absence from London, was inadvertently stated to have been from the Nursery of Messrs. Allen and Rogers.



RHODODENDRON campanulatum.*Bell-flowered Rose Bay.***Botanical Class and Order. DECANDRIA MONOGYNIA.****Natural Order. ERICACEÆ. Trib. 2. RHODOREÆ.****RHODODENDRON.** Supra fol. 10.

R. campanulatum, decandrum; foliis perennantibus elliptico-oblongis mucronatis subtus ferrugineis basi subcordatis, corollâ campanulata: lobis planis emarginatis; ovarii 6-locularibus glabris.

Rhododendron campanulatum. *D. Don in mem. vern. soc. 8. p. 410. prodr. fl. nepal. p. 158. Lodd. bot. cab. t. 1944. Wall. catal. n. 766.*

A small evergreen tree, of from 3 to 5 feet high, with spreading branches. Stem about an inch in diameter, clothed with a deciduous brown bark. Branches round, stiff, the younger ones of a dull red, and glabrous. Leaves stalked, oblong, elliptical, coriaceous, cartilaginous and recurved at the edges, rounded at both ends, the base slightly cordate, from the edges being folded back, terminated by a callous, obtuse gland, dark green, smooth and reticulated above, the underside copiously clothed with very short, scaly pubescence, at first of a purplish hue, afterwards changing to nearly white, and finally to a deep ferruginous brown, from 2 to 4 inches long, an inch to 2 inches broad; midrib pale-green. Footstalks about an inch long, rather thicker than a crow-quill, round, glabrous, of a dull red, and much wrinkled, marked above with a narrow furrow. Flowers copious, from 10 to 14 in a corymbose cluster. Peduncles straight, glabrous, nearly cylindrical, of a pale green, stained with purple, slightly angular, and 5-lobed at the top, an inch or more in length. Bractes oblong, acuminate, concave, copiously fringed, caducous, pale green. Corolla large, bell-shaped, pale-pink, changing to white, 2 inches across, with 5 broad, rounded, notched, even lobes, with the edges rather incurved; the upper one marked on the inside with irregular purple spots. Stamens

10, inclosed, unequal, declinate. *Filaments* awl-shaped, white, copiously bearded at the base. *Anthers* brown, of 2 parallel connate cells, opening by 2 terminal, round foramina. *Ovarium* oblong, conical, 6-sided, 6-celled, glabrous, seated on a flattish angular disk, of a glaucous green, dotted with white. *Style* declinate, filiform, pale-green, projecting beyond the corolla, club-shaped at the top. *Stigma* annulate, with an elevated, 6-lobed, papillose disk.

This splendid species of *Rhododendron* is a native of Gosaingsthan, a high mountain, to the north of the valley of Nepal, and was introduced to the gardens about ten years ago, from seeds communicated by Dr. Wallich. The flowers are of a milk white, shaded with lilac, and surpass in size all others of the genus, with the exception of one discovered in Java, by Dr. Horsfield, the dimensions of whose corolla are still greater. It was originally taken up by me from specimens sent by Dr. Wallich, and preserved in the Lambertian Herbarium. It is truly arborescent, although of much smaller dimensions than *arboreum*, and being found at a higher elevation, it is to be presumed that it will prove hardier than that species. It will be found to succeed well in a soil composed of two parts of sandy peat, and one of meadow loam, and it may be increased by layers, or by seeds.

Our drawing was taken from a fine healthy plant, which blossomed in Mr. Knight's choice collection, in April last.

It is remarkable, that India should possess the maximum of the typical species of this genus, while in China and Japan, is found a group connecting these with the pentandrous species of North America.

The generic name will be found explained at fol. 10.
D. Don.



1. Stamen. 2. Pistil.



Passiflora ligularis

W. & A.

LOBELIA polyphylla.

Leafy Lobelia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.

Trib. 2. LOBELIÆ.

LOBELIA. Suprà fol. 86.

L. polyphylla, foliis ovato-lanceolatis mucronatis argutè serratis glaberrimis, racemo terminali folioso, corollæ tubo calyce vix longiore.

Lobelia polyphylla. *Hook. and Arnott in Beechey's voy. append.* p. 33.

Root perennial. *Stems* erect, round, simple, solid, leafy, glabrous, rather woody at the base, rising to the height of 4 or 5 feet, and abounding in a nauseous, highly acrid juice. *Leaves* ovate-lanceolate, pointed, finely and unequally serrated, glabrous and shining on both sides, paler and veiny beneath, varying from 2 to 4 inches long; the lower ones more coarsely serrated, stalked and attenuated at the base; upper ones broader and sessile. *Racemes* terminal, leafy, from a span to a foot long. *Flowers* solitary, about as long as the bractes, on short filiform peduncles. *Bractes* large, leafy, ovate-lanceolate, pointed, finely serrated. *Calyx* hemispherical, slightly pubescent, with 5 erect, lanceolate, acuminate teeth. *Corolla* scarcely an inch long, of a dark purple, finely pubescent, cleft along the back; the limb bilabiate, with ovate-lanceolate, acute, recurved segments; the tube ventricose at the base, a little longer than the calyx. *Stamens* cohering, purple. *Anthers*, lower pair bearded at the apex, the rest naked. *Ovary* inferior, of two cells, with a membranous partition. *Ovula* crowded, attached to two thick, adnate placentæ. *Stigma* cloven, with two broad, revolute, greenish lobes.

This, together with *mucronata* and *Tupa*, from the same country, are very nearly allied, being found to differ chiefly in the proportionate length of the tube of the corolla, the

degree of development of the bractes, and in the presence or absence of downiness on the stem and leaves. The one now under consideration has the largest bractes, the shortest tube to the corolla, and is almost wholly glabrous.

It is frequent on the hills about Vålparaiso, in Chile, whence we have seen specimens from Messrs. Bridges, Collie, and Cuming; and it appears to have been first collected by Mr. Collie, during the stay of H. M. Ship Blossom at that port.

Introduced about four years ago, from seeds communicated by Mr. Bridges, and more recently by Mr. Cuming. We regret that our drawing, which was taken at the Nursery of Messrs. Allen and Rogers, in September last, conveys but an inadequate idea of the plant, which, when grown in perfection, is highly ornamental. A plant which flowered at Boyton, in the open border, in 1832, had several stems nearly six feet high, with the racemes more than a foot long.

It thrives best in a light rich soil, and is increased by division, or by seeds.

The explanation of the generic name is already given at fol. 86. *D. Don.*







Flora

St. w. by S. Engelm. & J. M. Coulter June 1. 1884

NIEREMBERGIA filicaulis.

Twiggy Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANEE. *Brown prodr.* 1. p. 443.

NIEREMBERGIA. *Suprà fol.* 172.

* *Corollæ tubo filiformi, fauce coarctatâ, staminibus erectis subæqualibus summo tubo insertis, stigmate complanato.* *Nierembergiæ propriæ.*

N. filicaulis, glabriuscula; foliis lineari-lanceolatis acutis, calyce acuminate corollæ tubi longitudine.

Nierembergia filicaulis. *Lindl. in bot. veg. t.* 1649.

Stems filiform, erect, about a foot high, with numerous spreading branches, and like the rest of the plant nearly glabrous. *Leaves* linear-lanceolate, or linear, pointed, recurved and spreading, about an inch or two in length; the lower ones broader, somewhat spathulate, and occasionally verticillate. *Peduncles* filiform, slender, glabrous, an inch or more in length. *Calyx* turbinate tubular, glabrous, furnished with ten ribs; the segments linear-lanceolate, acuminate, recurved and spreading, rather rigid, longer than the tube. *Corolla* nearly double the size of *N. gracilis*, pale purple, with the border and tube nearly white; the tube is copiously glandular, varying in length, but generally about as long as the calyx and limb, which last is concave, plaited with 5 shallow, rounded, somewhat reniform, entire lobes; faux yellow. *Stamens* 5, approximate, and inserted into the mouth of the tube. *Filaments* awl-shaped, compressed, white, minutely glandular. *Anthers* yellow, of 2 unequal parallel cells, having an oblique insertion. *Ovary* ovate, bilocular, surrounded at the base by an elevated, cupular, white, minutely crenulate disk. *Style* capillary, glabrous, dilated at the top. *Stigma* lunate, viscid, with arched connate lobes, keeled below.

Taller and more glabrous than *gracilis*, given at T.A.B. 172, of the present series, with the limb of the corolla about

double the size of that species, and the tube rarely exceeding the calyx in length. The filaments in both are glandular, and, in other respects, the plants are pretty nearly similar.

A native of Entre Rios, a province of the Republic of Buenos Ayres, and was raised in 1832, from seeds sent by Mr. Tweedie, to our friend Mr. Neill, in whose collection at Canonmills, near Edinburgh, we saw it in great perfection in the open border, in the early part of last Autumn. The plant requires a soil composed of peat and loam, in nearly equal proportions, and is increased with facility by cuttings.

Our drawing was taken at the Botanic Garden, Chelsea, in August last.

The generic name is explained at fol. 172. *D. Don.*



1. Corolla laid open to show the insertion of the Stamens. 2. Pistil.





1000

Cal. 4. Aug. 16. 1854. S. 11. 1854

W. J. 1854

CALCEOLÀRIA purpurea; var. picta.

Painted Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

Trib. 5. CALCEOLARIÆ.

CALCEOLARIA. *Suprà fol.* 220.

C. purpurea, herbacea; foliis radicalibus cuneato-oblongis dentato-serratis rugosis scabris; caulinis superioribus cordatis integerrimis, paniculâ corymbosâ diffusâ, corollæ labio inferiore orbiculato repando. *Nobis suprà fol.* 190.

Calceolaria purpurea. *Graham in bot. mag.* t. 2775. *Lindl. in bot. reg.* t. 1621.

γ. *picta*, floribus niveis purpureo-fasciatis.

Plant herbaceous, perennial. *Stems* rather slender, upright, branched, cylindrical, copiously clothed with glandular pubescence, viscid, green, from a span to a foot high. *Leaves*, the radical ones cuneate-oblong, or lanceolate, acute, coarsely and unequally serrated, of a brighter green than in var. *a*, pubescent on both sides, wrinkled and rough above with coarser hairs, varicose beneath, narrowed and entire from the middle downwards; those of the stem ovate, acuminate, spreading, toothed at the apex, attenuated at the base, but scarcely stalked; the upper ones and bractes embracing the stem, cordate, acuminate, entire, frequently reflexed. *Panicle* corymbose, ample, spreading. *Peduncles* divaricately spreading, variously forked. *Pedicels* slender, capillary, pubescent, glandular, varnished, about half an inch long. *Calyx* 4-partite, copiously clothed with glandular pubescence; the segments ovate, rather obtuse. *Corolla* white, with a very short tube; upper lip prominent, somewhat globular, helmet-shaped; the lower one 3 or 4 times larger, orbicular, compressed, marked above with several depressed lines, and a broad purple band, the edge

repandly crenate. *Filaments* very short, compressed, thickened at the base. *Anthers* pale yellow, the cells distinct, ventricose, opening lengthways. *Ovarium* ovate, bilocular, minutely glandular. *Style* cylindrical. *Stigma* an obtuse gland.

An accidental variety of *C. purpurea*, first raised, as we have been informed, by Mr. Wheeler, Nurseryman at Gloucester. It differs from *purpurea* in nothing but colour, and the greener hue of the whole herbage. Its copious delicate white blossoms, marked with a broad purple band, render it an agreeable addition to the already numerous cultivated varieties of this genus.

The plant requires a light rich soil, and can only be increased by division.

The specimen, whence our drawing was derived, was communicated by Mr. Gillen, Gardener to Mr. M'Intosh, at the East India Docks, in the beginning of last Summer.







Phaseolus vulgaris L. - Common Bean. - *Phaseolus vulgaris* L. - Common Bean.

CHYMOCÁRPUS pentaphýllus

Five-leaved Chymocarpus.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. TROPÆOLEÆ. *Juss. in ann. mss. 3. p. 447.*

CHYMOCARPUS. *Calyx persistens, æstivatione valvatâ. Petala 2. Pericarpium baccatum !*

Herba (bonariensis) scandens, radice tuberosâ, perenni. Folia petiolata, quinato-partita. Flores axillares, solitarii, longè pedunculati. Calyx : tubo erubescenti : limbo viridi. Petala punicea. Bacca pulposa, atro-violacea.

Chymocarpus pentaphyllus. D. Don. in linn. trans. 17. p. 14. et 145.

Tropæolum pentaphyllum. Lam. dict. 1. p. 612. ill. t. 177. Willd. sp. pl.

2. p. 299. Persoon syn. 1. p. 405. Smith in Rees Cyclop. in loco. Decand. prodr. 1. p. 684. St. Hil. pl. usuel. bras. t. 41. Grah. in bot. mag. t. 3190. Lindl. in bot. reg. t. 1547.

T. quinatum. Hellen. diss. de Tropæolo, p. 20. cum tabulâ.

A scandent herb, with numerous slender, filiform, glabrous stems, of a purplish hue, and of a nauseous bitter taste. *Root* thick, fleshy, fusiform, about the size and shape of the Altringham carrot, of a reddish brown. *Leaves* alternate, stalked, quinate, parted, with oblong-elliptical, entire, membranous, slightly mucronulate segments, an inch in length, glaucous beneath, and marked with dark purple veins, with a narrow and almost stipitate base; the intermediate ones longer. *Footstalks* supplying the place of tendrils, filiform, glabrous, green, 2 inches in length, frequently twisted spirally. *Flowers* axillary, solitary, frequently resupinate, from the twisting of the peduncles. *Peduncles* ascending, filiform, red, about three inches long. *Calyx* persistent, increasing in size and thickness, as the fruit advances towards maturity; the spur funnel-shaped, of a bright orange red, its extremity clavate, filled with a honey-like fluid, and partially separated from the rest by a constriction, as if formed by a ligature, and finally withering and falling off; the limb, green, marked inside with dots and lines of a dark red colour, 5-cleft and somewhat bilabiate, with ovate, acute, nearly equal lobes, having a valvate æstivation. *Petals* 2, very small, purple, spathulate, entire, inserted in the upper lip. *Stamens* 8, unequal. *Filaments* awl-shaped, dilated at the base. *Anthers* four-sided, blunt, of 2 parallel connate cells, with involute valves. *Ovary* 3-celled, with solitary pendulous ovula. *Style* tri-

quetrous, glabrous. *Stigma* of 3 short awl-shaped recurved teeth. *Fruit* a black juicy berry, covered with a bluish bloom, composed of 3, or from abortion, of a single monospermous carpels, nearly spherical, smooth and even, resembling in appearance, the Zante grape, and having an agreeable sweet taste. *Testa* cartilaginous, white. *Embryo* small, white. *Cotyledons* round, compressed.

This highly interesting plant is frequent in the countries bordering on the Rio de la Plata, where it was discovered by Commerson, and has been noticed by many other botanists since, but it was not until its recent introduction to the British Gardens that the peculiarities of its structure have become known, which has determined its claims to be regarded as the type of a new genus. The most remarkable peculiarity is in the nature of its fruit, which is a black, juicy berry, not unlike, both in appearance and flavour, the Zante grape. Besides the reduced number of its petals, a character the importance of which I am not disposed to insist much upon, the genus likewise differs in the persistent nature and valvate æstivation of its calyx, that of *Tropæolum* being imbricate and deciduous.

I am inclined to think that *Tropæolum dipetalum* of the *Flora Peruviana* will prove to be a second species of this genus, and it is possible that *Tropæolum* may include the types of other genera, when the nature of the fruit in the different species becomes better known.

It is stated in the Garden Catalogues, to have been introduced in 1824, but this information is erroneous, the plant having been first raised by our much-esteemed friend Mr. Neill in 1830, from seeds collected at Buenos Ayres by Mr. Tweedie, and it flowered for the first time in his choice collection at Canonmills, near Edinburgh, in the Autumn of 1832. The plant having been placed in the open border early in the Summer of last year, it was found to thrive much more vigorously than when retained in the greenhouse, and in August, when our drawing was taken, it was covered with a profusion of blossoms, and subsequently ripened its fruit freely.

The plant thrives well in a mixture of sandy peat and loam, and may be increased by seeds or cuttings, which last root readily planted in pure sand, and placed in a hot-bed.

The generic name is derived from *χυμος*, juicy, and *καρπος*, a fruit, in allusion to the juicy nature of the fruit, which forms so remarkable a peculiarity in this genus. *D. Don.*



1. Portion of the calyx showing the insertion of the stamens. 2. Pistil. 3. Ripe fruit with the persistent calyx.





Fig. 1. *Scilla maritima* L.

Fig. 2.

ORNITHOGALUM biflorum.

Twin-flowered Star of Bethlehem.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. p. 274.

ORNITHOGALUM. *Perianthium* profundè 6-partitum, æquale, persistent, patulum. *Stamina* 6, subæqualia, disco inserta. *Filamenta* compressa, apice attenuata. *Antheræ* incumbentes: *loculis* basi solutis, distinctis. *Stigma* simplex v. trilobum. *Caprula* trilocularis, polysperma. *Semina* subglobosa v. angulata, nuda.

Genus (cosmopolitanum) scapis nudis simplicibus, floribus racemosis plerumque albis, bracteis membranaceis.

○ *biflorum*, scapo filiformi foliis longiore, pedunculis subgeminatis, bracteis brevissimis, filamentis subulatis, stylo trigono, stigmate simplici.

Soilla biflora. Ruiz et Pavon fl. peruv. et chil. 3. p. 69. t. 302. f. a. *Perseon syn.* 1. p. 366. *Schult. syst.* 7. p. 558.

Bulb spherical, about the size of a shallot, the outside of a dark brown. *Scape* about a foot and a half high, filiform, solid, wiry, of a glaucous green. *Leaves* broadly linear, blunt, channelled and concave above, flaccid, recurved glaucous green, convex and slightly angular underneath, from a span to a foot long. *Peduncles* single-flowered, in distant fascicles, of 2 or 3 together, or solitary, filiform, slender, erect and spreading, disposed in a loose, terminal erect raceme. *Flowers* white, about the size of those of *Allium lacteum*, pale green outside at the base. *Bractes* very short, membranous, lanceolate, acuminate. *Perianthium* persistent, deeply divided into 6 elliptical-oblong, blunt, concave, segments, with a narrow green furrow; the inner 3 broader and longer. *Stamens* 6, equal. *Filaments* awl-shaped, compressed, white. *Anthers* yellow, cordate, incumbent, the cells opening lengthways on the inside, approximate and parallel at the top. *Ovarium* bluntly 3-sided, 3-celled, with two rows of rounded and closely packed ovula in each cell. *Style* about as long as the ova-

rium, bluntly 3-sided, thicker at the base. *Stigma* simple, truncate, minutely papillose, white.

A native of sandy hills in the Provinces of Chancay and Cercado, in Peru, where it was discovered by Ruiz and Pavon, flowering in June and July. The plant possesses no showy beauty to recommend it, but its habit is extremely graceful, and its flowers are delicate and pretty, and on these accounts well entitled to a place in the flower garden.

The persistent perianthium and other characters clearly show it to be no *Scilla*, and entirely confirm the arrangement which we have adopted.

Our drawing was taken from a plant which blossomed in Mrs. Marryat's interesting collection at Wimbledon in the beginning of April last. It should be planted in a mixture of peat and sand, and we have no doubt of its proving nearly, if not quite hardy.

For the explanation of the generic name see fol. 42 of the present series. *D. Don.*



1. Outer segment of perianthium. 2. Inner ditto. 3. Stamen. 4. Pistil. 5. Ovarium transversely cut.



VIOLA pedata; var. flabellata.

Fan-leaved Violet.

Linnean Class and Order. PENTANDRIA MONOGYNIA.
Natural Order. VIOLARIÆ. *Decand. prodr.* 1. p. 287.
VIOLA. Suprà fol. 126.

- V. pedata*, stigmatibus incrassatis hinc obliquè truncato, rostro brevissimo, foliis pellucido-punctatis palmatisectis, stipulis pectinatis laceris longè adhærentibus, petalis omnibus glabris. *Decand. prodr.* 1. 291.
- Viola pedata*, *Linn. sp. pl. ed. 2.* p. 1323. *Willd. sp. pl.* 1. 1180. *Curtis, bot. mag. t.* 89. *Michx., fl. bor. amer.* 2. 161. *Andr. bot. repos. t.* 153. *Pers. synop.* 1. 254. *Poir., encycl. méth.* 8. 625. *Pursh, fl. amer. sept.* 1. 171. *Nutt. gen.* 1. 147. *Ram. et Schult. syst.* 5. 351. *Elliott, bot. of S. Carolina and Georgia*, 1. 300. *Bigelow, fl. bost.* 96. *Torrey, fl. of the Middle and Northern Sections of the United States*, 1. 249. *Spreng. syst.* 1. 797.
- Viola virginiana tricolor*, foliis multifidis, cauliculo aphylo. *Pluk. alm.* 388. t. 114. fig. 7.
- Viola digitata*. *Pursh, fl. amer. sept.* 1. 171.—*Roem. et Schult. l. c.* 5. 351.
- Viola ranunculifolia?* *Poir., enc. méth.* 8. 626.—*Roem. et Schult. l. c.* 5. 351.
- Viola pedata* var. *Graham in edin. new. phil. journal*, Decr. 1833.

Root having a large fleshy crown. *Leaves* ($1\frac{1}{2}$ inch long, 2 inches across) all radical, flat, somewhat fleshy, covered on the upper surface with minute pubescence, glabrous and shining below, having many minute transparent dots, strongly nerved, nerves prominent on both sides, but especially on the upper, the outer leaves often cuneate, truncated, crenate in the centre, inciso-crenate at the sides of the abrupt termination, the others pedate, 5-7-lobed, lobes spatulate, 3-5-toothed at the apex, or entire. *Petioles* (2-3 inches long) rounded below, flat above, and there having a strong prominent rib. *Stipulæ* subulate, pectinato-ciliate, adhering to the dilated base of the petiole for nearly half their length. *Scape* (5 inches long) erect, longer than the leaves, glabrous, channelled on its inner side,

bracteate a little way above the base; *bractæ* opposite, subulate, toothed, gibbous at the base. *Calyx* glabrous, green; leaflets shortly auricled, (the two lowest every way the largest,) broad and truncated at the base, tapering to a point at the apex. *Corolla* large and very handsome; lowest petal pale lilac, white in front near the claw, obcordate, pendulous, shortly spurred; the other petals erect or reflected, elliptical, somewhat oblique, the two centre ones, and nearly the upper half of the side ones, dark velvet-purple, behind all the petals are pale lilac, nearly uniform. *Stamens* free, and anthers nearly without fallen in the specimen described, the two lowest longer than the others, apices oblong, blunt, concave on the inside, orange-yellow. *Pistil* equal in length to the lowest stamens, every where glabrous; germen conical, green; style clavate; stigma obliquely truncated, very shortly rostrate.

This plant is extremely different in its appearance from the specimen figured in Bot. Mag. t. 89, but I do not find any characters by which it can be considered specifically distinct. It is probably the variety mentioned by Pursh as having a handsome corolla, variegated with pale blue and dark purple-velvet; but this is quoted by De Candolle, on the authority of Rafinesque, as his β , which has a pubescent pistil, whereas in this it is perfectly glabrous.—I have quoted *Viola ranunculifolia* with a slight degree of doubt, merely because it is described as glabrous, which this is not on the surface of the leaves. The plant is extremely beautiful, and highly deserving of cultivation in the open border. It was introduced by Mr. Drummond from Georgia into the Botanic Garden, Glasgow, from whence it was sent to the Botanic Garden, Edinburgh, in 1832, and there it first produced a succession of flowers in the Greenhouse in the beginning of October, 1833. *Graham, MSS.*

We are indebted to Dr. Graham for the above elaborate account of this elegant violet, and to Mr. James M'Nab, for the very beautiful drawing whence our engraving was taken. The *V. digitata* is wanting in Pursh's Herbarium, but there is no doubt that the present is the plant intended, and we entirely agree with the views of our learned friend, in considering it a mere variety of *pedata*, having the lobes of the leaves more confluent than in the normal form of the species. It appears to be also identical with *V. flabellifolia* of Loddiges (Bot. Cab. t. 777.) *D. Don.*







... of

RANUNCULUS millefoliatus; var. grandiflorus.

Large-flowered Milfoil-leaved Crowfoot.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen. p.* 231.

RANUNCULUS. Calyx 2 v. 5-sepalus, deciduus. Petala 5 v. rarius plura, basi intus squamulâ foveolâve nectariferâ instructa. Stamina et Pistilla indefinita. Cariopsides capitatae v. spicatae, sæpius mucronatae. Herbae plerumque europææ, polymorphæ.

R. millefoliatus, calycibus adpressis villosis, foliis tripinnato-partitis: segmentis lineari-lanceolatis acutis glabris, caule nudiusculo subunifloro adpressè piloso.

Ranunculus millefoliatus. *Vahl symb.* 2. p. 63. t. 37. *Desf. fl. atl.* 1. p. 441. t. 116. *Willd. sp. pl.* 2. p. 1328. *Decand. syst.* 1. p. 258. *prodr.* 1. p. 27. *Smith fl. græc.* Sibth. 6. p. 17. t. 521. *G. Don gen. syst. gard. and bot.* 1. p. 28. *Hooker in bot. mag.* t. 3009.

β. grandiflorus, floribus majoribus.

Root composed of numerous oval, blunt, fleshy tubers, intermixed with branched fibres. *Stem* mostly single-flowered, about a span high, erect, filiform, copiously clothed with adpressed hairs, furnished with one or two leaves, but occasionally naked. *Leaves* tripinnately divided, with linear lanceolate, acute, glabrous segments, of a dull green, and rather fleshy. *Footstalks* almost filiform, sparingly villous, dull purple towards the base, from 2 to 3 inches long, marked above with a narrow furrow. *Flowers* mostly solitary, of a golden yellow, varying in size, sometimes an inch and a half across. *Sepals* rounded, villous, membranous, concave, caducous. *Petals* obovate, glossy, furnished at the base with a truncate scale. *Filaments* linear, flat, glabrous, longer than the anthers. *Torus* elevated, cylindrical, scarcely half an inch long. *Carpels* nearly orbicular, compressed, glabrous, with a short, hooked, rather thick beak.

Received by Mrs. Palliser from Professor Tenore with

the name of *R. garganicus*, but we find no mention of it in any work that has come under our notice. The plant however, differs in no respect from the ordinary state of *millefoliatus*, except in its larger flowers, and moreover agrees so entirely with the figure given by Vahl, that we dare not venture to separate them. The species is nearly related to *chaerophyllos*, but is distinguished by its short, oval tubers, more pointed segments of its leaves, larger flowers, and adpressed calyx. It is found in the hilly parts of Italy, Greece, and the North of Africa. The present variety is from Mount St. Angelo, anciently Garganus, in the kingdom of Naples.

The plant requires a light loamy soil, is quite hardy, and may be increased by division or by seeds.

Our drawing was taken from a plant which flowered in Mrs. Marryat's collection in April last.

The generic name is derived from *Rana*, a frog, several species of the genus being found in places where frogs abound. *D. Don.*



1 Petal. 2 Stamen. 3. Pistil.





MORÆA tricuspis; var. ocellata.

Trident-bearing Moræa.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

MORÆA. *Perianthium* profundè 6-partitum, petaloideum: segmentis inæqualibus: tubo nullo. *Filamenta* connata. *Antheræ* adpressæ. *Stigmata* 3, petaloidea, bilabiata, fissa. *Capula* obtusè prismatica, membranacea. *Semina* subrotunda.

Plantæ (plerumque capenses) *elegantes*. *Rhizoma* bulbo-tuber. *Caulis* nunc indivisus. *Folia* linearia, nervosa. *Inflorescentia* fasciculata, uniformis. *Spatha* bivalvis, pauciflora.

M. tricuspis, barbata; perianthii segmentis interioribus trifidis, stigmatum lobis inæquilateri-oblongis repando-crenatis, foliis glabris.

Moræa tricuspis. *Ker in bot. mag.* t. 696. *Dryand. in hort. kew. ed.* 2. 1. p. 111.

Viussieuxia tricuspis. *Spreng. syst.* 1. p. 165.

V. aristata. *Houtt. Linn. pfl. syst.* 11. p. 105. t. 80.

Iris tricuspis. *Thunb. diss.* p. 14. *prodr.* p. 11. *fl. capens.* 1. p. 289.

Jacq. coll. 4. p. 99. *ic. rar.* 2. t. 222. *Willd. sp. pl.* 1. p. 231. *Persoon syn.* 1. p. 52.

I. tricuspidata. *Linn. suppl.* p. 98.

β. ocellata, flore candido, laminâ basi ocellatâ.

Viussieuxia glaucopis. *Decand. in ann. mus.* 2. p. 141. *Redouté lilac.* t. 42. *Rœm. et Schult. syst.* 1. p. 490.

V. aristata. *Delaroch. diss. n.* 2. p. 34.

Iris tricuspis. *Jacq. coll.* 4. t. 9. f. 1.

I. pavonia. *Curt. bot. mag.* t. 168. (nec aliorum.)

Ferraria tricuspis. *Willd. enum.* 2. p. 691.

Tuber bulbiform, lateral, about the size of a filbert. *Stem* erect, about a foot high, slender, round, flexuose, solid, glabrous, geniculate, slightly striated, grass-green. *Leaves*, the radical ones about twice the length of the stem, narrow, linear, flat, ribbed and furrowed, of a glaucous green, attenuated at both ends; those of the stem, about 3, the two upper ones but partially developed, the lowest one longer than the stem, channelled, convolute at the base, ribbed beneath. *Sheaths* entire, the upper ones terminating in a bristle-shaped point. *Spathes* 2-valved, convolute, slightly ventricose, with a scariose border, finely striated, bristle-pointed, the lower one shorter. *Peduncles* compressed, about an inch and a half long. *Perianthium* deeply parted into 6 segments, the 3 outer ones broadly cuneate, entire and even at the edge, ground pure white, streaked with purple especially beneath, furnished just above the claw with a broad round azure spot, having an irregularly lobed violet border, the claws cuneate, lined with purple spots, and copiously bearded with yellow hairs; 3 inner ones

scarcely half the length, cuneate, convolute, erect, of an olive colour towards the base, ground white above, and spotted with violet, 3-lobed at the top, the lateral ones broad and rounded, with entire wavy margins, the intermediate one longer, linear, pointed, reflexed. *Filaments* 3, white, united into a cylindrical column, about a nail in length. *Anthems* adpressed to the back of the stigmata, linear, mucronate, with two adnate parallel cells, which are free and slightly divaricate at the base. *Ovarium* bluntly 3-sided, half an inch long, 3-celled, with three rows of ovules in each cell. *Stigmas* 3, petaliform, ligulate, bilabiate, cloven, with oblong semi-lunar connivent lobes, irregularly repand and crenate at the outer edge, white and veiny, pale blue, and glabrous at the base, the outer lip very short, truncate with 2 teeth.

This very elegant variety, which is not surpassed in beauty by any of its congeners, has been regarded as a species by De Candolle, Sprengel, and others, but we can perceive no difference, except colour, whereby to distinguish it from *tricuspis*, to which in our opinion it has been very properly united by Jacquin, Thunberg, and Ker. Colour, which in many exogenous families is almost a certain indication of a specific distinction, will be found a very fallacious character among the *Irideæ*, and we fear that many botanists, both ancient and modern, have been led to multiply species among the *Monocotyledones* by relying on this deceitful test. We are satisfied that a careful investigation will considerably reduce the species, of most of the larger genera, in the latter class.

It is a mistake to suppose that to cultivate the Cape *Irideæ* a greenhouse is necessary, all that they require is protection from frost, and this can be best done by a frame, which may be removed entirely in fine weather. A warm sunny border should be selected for their culture, and the earth removed to the depth of a foot or 18 inches, and replaced by a mixture of vegetable mould and river sand. The bulbs should be taken up in the Autumn, and replanted about the middle of January, the larger ones being carefully selected from the rest. The earth will require to be renewed every two or three years.

Our drawing was taken at Colvill's Nursery, in May last.

The genus was named by Philip Miller after Mr. Robert More of Shrewsbury, a zealous cultivator of rare plants, and originally written *Morea*. We have however, followed the orthography of Linnæus, who probably intended by it to commemorate his wife, whose name was Moræus, but who, from all accounts, appears to have illmerited this compliment on the part of the husband. *D. Don.*



1. Outer segment of perianthium. 2. Inner ditto. 3. Organs of reproduction.



...



LOPHOSPERMUM Rhodochiton.

Purple Lophospermum.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

Trib. 2. ANTIRRHINÆ. *D. Don in linn. trans.* 15. p. 351. *Chavannes. monogr.* p. 73.

LOPHOSPERMUM. *Suprà fol.* 68.

L. Rhodochiton, foliis cordatis acuminatis grosse dentato-serratis, calycibus semi-5-fidis coloratis, corollâ tubulosâ, filamentis simplicibus.
Rhodochiton volubila. Zuccarini.

A climbing, suffrutescent plant, clothed with straight white jointed shining hairs, terminated by a small gland. *Stems* filiform, slender, branched; the younger branches dark purple. *Leaves* alternate, distant, stalked, cordate, acuminate, lobed and serrated with broad unequal mucronate teeth, 5-nerved, soft and rather slimy to the touch, purple beneath, about three inches long, and nearly the same in breadth, the older ones becoming somewhat fleshy, and almost glabrous; posterior lobes rounded, toothed, connivent, and occasionally overlapping each other. *Footstalks* from 2 to 3 inches long, filiform, purple, marked above with a shallow furrow, often spirally twisted. *Flowers* axillary, solitary, pendulous. *Peduncles* slender, filiform, pale purple, from 3 to 5 inches long, frequently twisted spirally, finally becoming, together with the calyx, glabrous and shining. *Calyx* large, campanulate, widely spreading, membranous, pale purple, divided to the middle into 5, ovate, pointed lobes. *Corolla* funnel-shaped, of an intense purple, an inch and a-half long, clothed with white glandular hairs; tube 5-sided, clothed internally with reversed bristly hairs; faux cylindrical, scarcely ventricose; limb 5-lobed, lobes oval, connivent, plain and entire at the margin, rounded at the

apex, the lower one longer. *Stamens* 4, didynamous, extending beyond the mouth of the tube, there being no rudiment of a fifth. *Filaments* straight, filiform, the base thickened, and copiously beset with reversed, bristly hairs. *Anthers* violet, 2-lobed, the cells opening lengthways, confluent at the top. *Pollen* white, farinaceous. *Ovarium* globose, bilocular, seated on an orbicular fleshy disk, copiously clothed with glandular hairs. *Style* filiform, purple, nearly glabrous. *Stigma* white, 2-lobed, the lobes very short, blunt, and copiously papillose. *Capsule* sphaerical, 2-celled, bursting irregularly at the top. *Seeds* numerous, flat, the testa thick and spongy, with elevated plaits of cellular tissue, and having a broad, membranous, torn border, truncate at both ends.

This very beautiful new climber is a native of Mexico, and was introduced to Germany about two years ago, and from the Royal Botanic Garden, at Berlin, it has found its way into the collections of this country. Professor Zuccarini has named it *Rhodochiton volubile*, but we have been unable to find any description of it by that botanist. The plant is clearly a legitimate species of *Lophospermum*, and differs in no respect from the other two species, both also natives of Mexico, except in its less deeply divided calyx, and in the more cylindrical tube of its corolla.

Our drawing was taken from a fine plant, which blossomed in Mrs. Marryat's collection, at Wimbledon, in June last.

The plant may be increased both by seeds and cuttings, and will require the same treatment as the *L. erubescens*, and is apparently quite as hardy as that species.

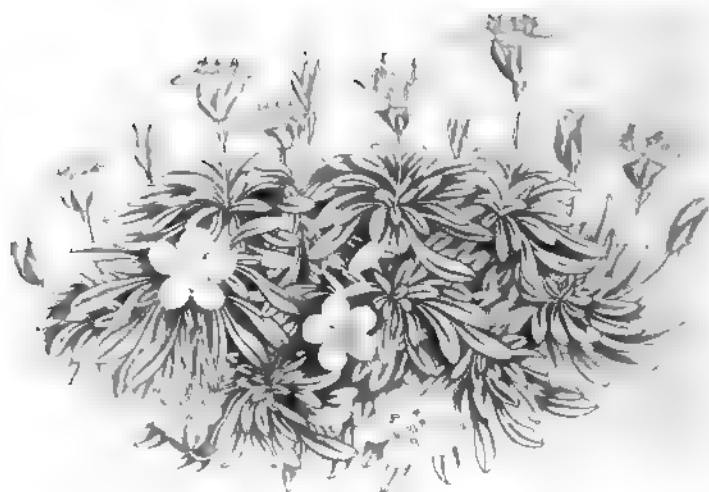
Our knowledge of the ripe fruit is derived from specimens kindly communicated to us by Mr. F. Otto, Junior, of Berlin.

The generic name will be found explained at fol. 68, *D. Don*.



1. Stamens, with a portion of the corolla. 2. Pistil.





DIAPENSIA lappónica.

Lapland Diapensia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. POLEMONIACEÆ.

DIAPENSIA. Calyx 5-partitus, coriaceus, basi tribracteatus. Corolla hypocrateriformis: tubo brevi, ampliore: limbo plano, 5-fido. Stamina 5, sinibus corollæ inserta, subæssilia. Antheræ lineares, obtusæ, biloculares, basi insertæ, longitudinaliter dehiscentes. Stigma obsolete trilobum. Capsula 3-locularis, polysperma.

Herbæ (borealis,) cæspitosa, scampervirens. Folia alterna, ad radicem conferta, coriacea, integerrima. Pedunculi scapiformes, solitarii, uniflori.

Obs. Genus Phlogi affine, sed abundè differt corollâ breviori, stigmatibus concretis, capsulæ loculis polyspermis, foliis alternis, et inflorescentiâ.
D. Don Mus.

D. lapponica, foliis lineari-spathulatis coriaceis glabris margine callosis subrevolutis, pedunculo subunifloro erecto, staminibus muticis.

Diapensia lapponica. Linn. fl. lappon. n. 88. t. 1. f. 1. fl. suec. ed. 1755. n. 169. sp. pl. ed. 1762. 1. p. 202. Oed. fl. dan. t. 47. Lam. ill. t. 102. Willd. sp. pl. 1. p. 795. Pers. synops. 1. p. 185. Sims in bot. mag. t. 1108. Aiton hort. kew. ed. 2. vol. 1. p. 306. Nuttall gen. 1. 123. Ram. et Schult. syst. veg. 4. p. 356. Bigelow florul. boston. p. 83. Torrey fl. of the middle and northern sections of United States, 1. p. 231. Wahlenb. fl. lapp. no. 105, t. 9. fl. suec. p. 122. Spreng. syst. veg. 1. p. 623.

Diapensia obtusifolia. Salisb. parad. lond. t. 104. Pursh fl. amer. sept. 1. p. 147.

Stems short, cespitose. **Leaves** crowded, linear-spathulate, glabrous, dark green above, paler below, avenous, coriaceous, concave, and having membranous edges at the base, towards the apex the edges are callous and slightly revolute. **Peduncles** (1 inch long) terminal, generally single-flowered, having at the apex 3 or 5 oblong, concave, adpressed bractæ, gradually approaching the appearance of the calyx leaflets. **Calyx** 5-phyllous, leaflets umbricated, obovato-spathulate, emarginate, slightly keeled, the three outer the largest.

Corolla white, hypocrateriform, longer than the calyx. *Tube* wide, hypogynous. *Limb* ($\frac{1}{2}$ -inch across) 5-parted, segments rounded, as long as the tube. *Stamens* 5, shorter than the limb. *Filaments* subulato-linear, adhering to the whole length of the tube, erect or slightly connivent from the fissure between the lobes. *Anthers* yellow, 2-cells, cells divaricated at the base, and opening along their outer edge; pollen granules small, oblong. *Pistil* as long as the stamens. *Stigma* capitate. *Style* tapering. *Germen* ovate, 3-locular. *Ovules* very numerous, attached to central receptacles.

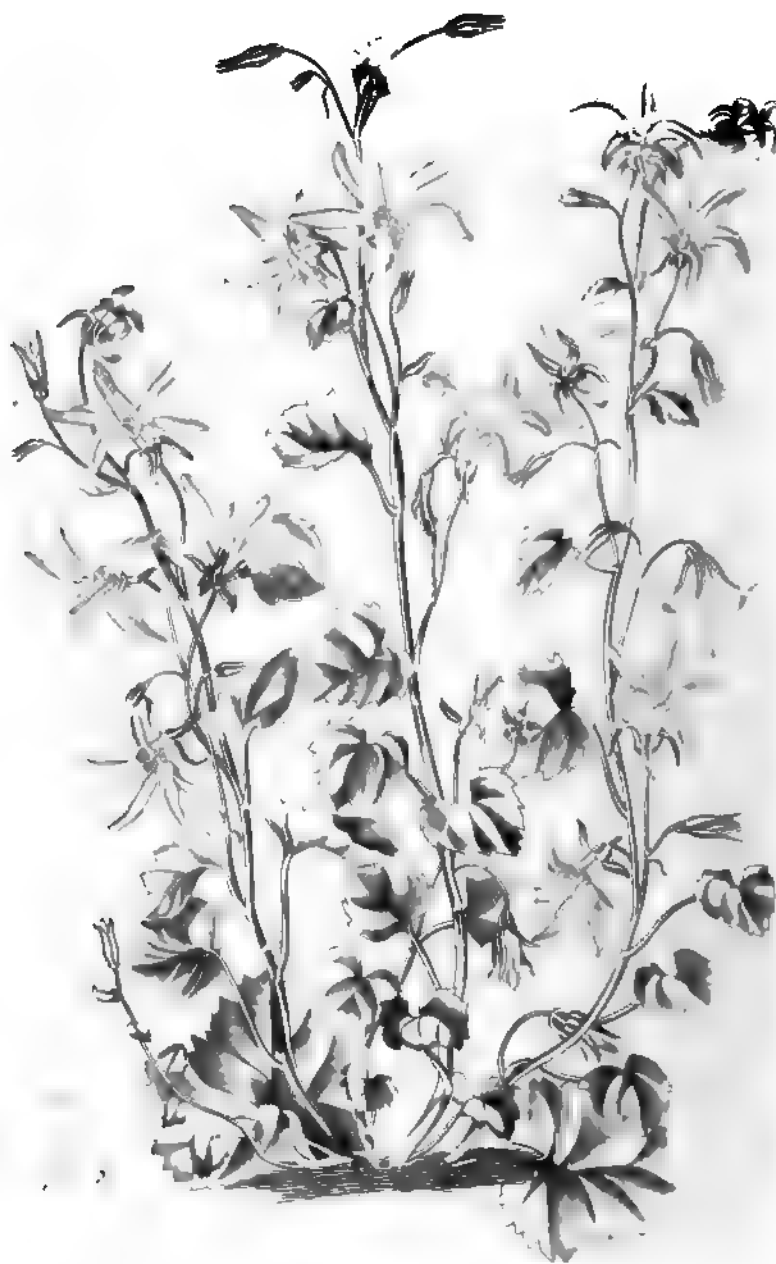
This Plant was raised at the Botanic Garden, Edinburgh, from seeds gathered on the Rocky Mountains, North America, by Mr. Drummond, in the last expedition of Captain Franklin, and flowered in April, having been kept in the open border, and occasionally covered with a hand-glass. It is one of several alpine species, which are met with near the summit of the White Hills, New Hampshire, mountains far removed from any other of sufficient elevation to produce them. It is not easy to conjecture why such plants as this are scattered so widely into similar climates of the old and new world, while the profusion of Heaths, which the former possesses, does not afford a single species to America. *Graham, MSS.*

For the above account of this interesting little alpine plant, we are indebted to our learned and estimable friend, Dr. Graham, whose generous sentiments and devotion to science are well appreciated by those who enjoy the pleasure of his acquaintance. The drawing is from the accurate pencil of Mr. James M'Nab, whom an ardent love of botany has led to visit the wilds of America.

Diapensia was the Greek name of the Sanicle, and was given by Linnæus in the *Flora Lapponica*, without any good reason, as he himself confesses, to the elegant little plant now before us. *D. Don.*







Puccinia *Aug 1. 1834*

CAMPÁNULA gargaríca.

Garganian Bell-flower.

Linnean Class and Order. PENTANDRIA MONOGYNIA.
Natural Order CAMPANULACEÆ. *Brown prodr.* 1. p. 559.
CAMPANULA. *Suprà.* fol. 80.

C. gargarica, caulibus diffusis, foliis reniformi-cordatis inciso-serratis, pedunculis subbifloris, laciniis calycinis lanceolatis acuminatis dentatis corollâ rotatâ vix brevioribus.

Campanula gargarica. *Ten. fl. neap. prodr. append.* 1827. *Alph. Decand. monogr.* p. 299.

C. elatines. *Petagn. inst. bot.* 2. p. 367.

C. gargarica, saxatilis, hirsuta, pendula, longius radicata, amplo rotundo folio, flore parvo cœruleo D. Micheli. *Till. cat. hort. pis.* p. 29.

Plant perennial, tufted, of a grass green, glabrous and shining, or sometimes hairy. *Stems* many, filiform, branched, easy, about 3 inches high. *Leaves* on long narrow footstalks, reniform or cordate, deeply serrate, with rounded nearly equal mucronulate teeth, membranous, the posterior lobes connivent; those of the stem smaller, cordate, on shorter footstalks. *Flowers* disposed in a racemose panicle. *Peduncles* slender, filiform, about an inch long. *Calyx* hemispherical, angular, glabrous, the segments nearly equal, lanceolate, acuminate, spreading and recurved, finally becoming revolute, and generally furnished at the base with two opposite sharp teeth. *Corolla* rotate, rather longer than the calyx, of a cobalt blue, the limb deeply divided into 5 ovate-lanceolate, acute, recurved segments. *Stamens* 5, shorter than the corolla. *Filaments* flat, membranous, white, hairy on the inside, broader at the base. *Anthers* linear, yellow. *Ovary* 3-celled. *Style* rather declinate, cylindrical, white, longer than the corolla. *Stigma* clavate, pale blue, of 3 semi-cylindrical, papillose cohering lobes, as long as the style.

This pretty little *Campanula* was discovered by Professor Tenore on Mount St. Angelo, anciently Garganus, in the kingdom of Naples, and named by him after that locality

to which it appears to be peculiar. It was raised in the Bishop of Rochester's garden at Bromley, from seeds sent to Miss Murray, from Naples, by the Honourable William T. H. Fox Strangways, and thence plants have been liberally distributed to various collections. Our drawing was taken from a plant in full flower, communicated by Mr. Mallison from Sandridge Park, the seat of Sir Samuel Scott, Bart. There is a variety with hairy leaves, mentioned by Tenore, which has also been raised at Bromley. The species comes very near to *C. elatines* of Linnæus, but appears to be sufficiently distinct.

The plant is admirably adapted for a rockwork, and appears to thrive best in a mixture of peat and loam. It is readily increased by division. As the plant is apt to suffer from too much wet, I would recommend one or two to be kept in pots in the frame during winter.

For the explanation of the generic name, see fol. 80, *D. Don*.



1. Stamens and Pistil. 2. Stamen separate.

Corrections in Numbers for March and July.

No. 58, Fol. 232. SOLLYA HETEROPHYLLA.

I was led, partly by an inspection of the ovarium, and partly by the description of Labillardière, (who appears only to have seen it in the young state,) to describe the fruit of this plant as capsular, but having had an opportunity of examining samples of the fruit which ripened at Mr. Knight's during the past summer, I now find that it is a berry, and that its structure differs in no respect from that of *Billardiera*, with which genus the plant must be again combined. I would propose the following additions to the description.

Folia primordialia serrata. Fructus pollicaris, cylindræus, baccatus, pulpâ molli sapidâ refertus, 4-locularis, polyspermus, stylo persistenti coronatus. Semina suborbiculata, compressa, fusca, punctata, in pulpam nidulantia.

No. 62. VIOLA PEDATA.

Fol. 247, line 11, overleaf, for *fallen*, read *pollen*.



CLÉMATIS montana.*Mountain Virgin's Bower.**Linnean Class and Order.* POLYANDRIA POLYGYNIA.*Natural Order.* RANUNCULACEÆ. *Just. gen.* p. 231.*CLEMATIS.* *Suprà fol.* 217.

C. montana, pedunculis unifloris aggregatis ebracteatis, foliis ternato-partitis: segmentis ovato-oblongis acuminatis inciso-dentatis, sepalis elliptico-oblongis mucronatis patulis.

Clematis montana. *Ham. Mus. Decand. syst.* 1. p. 164. *prodr.* 1. p. 9. *Wall. pl. asiat. var.* 3. p. 12. t. 217. *Royle illustr. himal. bot.* p. 51.

C. anemoniflora. *D. Don prodr. fl. nepal.* p. 192. *G. Don syst. gard. and bot.* 1. p. 9.

This is a large, branching, climbing shrub, with a thick deciduous ash-coloured bark. The younger parts in the native specimens are clothed with soft white hairs, but in the cultivated plant they are nearly glabrous. *Branches* filiform, striated, occasionally tinged with purple. *Leaves* tufted, stalked, alternately parted, with ovate-oblong, acuminate, recurved, deeply toothed, pale-green, veiny, concave segments, paler and shining below, the base entire and scarcely attenuated. *Footstalks* an inch long, nearly cylindrical, furrowed above with a narrow line. *Flowers* copious, about the size and form of those of *Anemone sylvestris*. *Peduncles* solitary, erect, one-flowered, filiform, about 3 inches long, destitute of bractes. *Sepals* 4, elliptical-oblong, spreading, mucronulate, and sometimes slightly crenulate at the apex, an inch in length, pure white, with prominent veins, faintly stained with pink outside at the base. *Filaments* numerous, equal, nearly cylindrical, white. *Anthers* linear, obtuse, shorter than the filaments, pale yellow. *Pistils* approximate in a cylindrical column. *Ovaries* exteriorly ventricose, glabrous, shining, reddish brown. *Styles* clothed with long,

white, silky hairs. *Stigmas* yellowish green, copiously papillose, recurved, blunt, convex above, and marked along the middle with a very narrow furrow. *Torus* elevated, hairy.

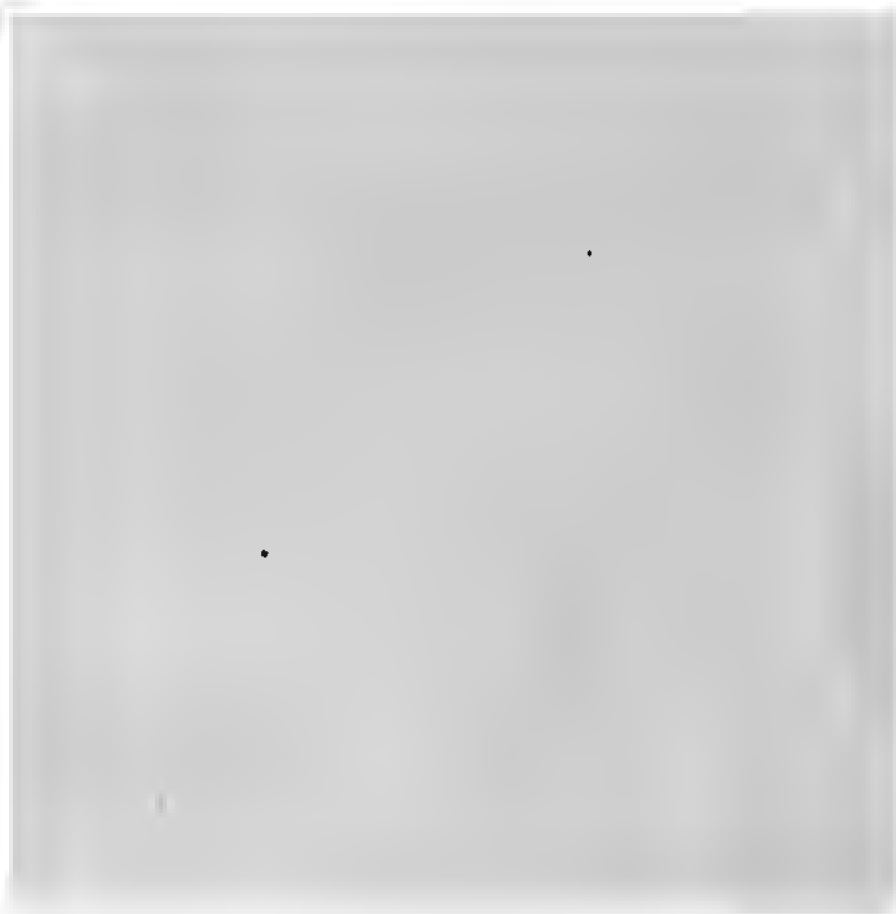
Flowering specimens of this highly ornamental plant were obligingly communicated to us, in May last, by Lady Sarah Amherst, from Montreal, Kent, the seat of her noble father.

The species was originally collected by Dr. Francis Hamilton, at Chitlong, in the Valley of Nepal, flowering in April, and it appears to be a pretty general plant on the mountains, at an elevation of, from 5000 to 7000 feet above the level of the sea, as our learned friend Mr. Royle informs us in his valuable illustrations of the Botany of the "Himalayan Mountains," a work which may be consulted with much advantage by the botanist, and still more by the general reader who desires to make himself acquainted with the natural productions of those regions of which it treats.

The plant proves to be quite hardy, and seems to flourish as well in the climate of England, as on its native mountains. It loves a loamy soil, and is readily multiplied by layers. The generic name will be found explained at fol. 217. *D. Don.*



1. Stamen. 2. Pistil.





IRIS Swertii.

Swerts Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. Brown prodr. 1. p. 302.

IRIS. Suprà fol. 56.

* *Barbata, perianthii laciniæ interiores amplæ conniventes, ovario obtusè trigono, spathis scariosis. Sp. normales europææ.*

I. Swertii, barbata; caule multifloro tereti foliis altiore, perianthii laciniis replicato-undulatis; exterioribus recurvatis oblongo-spathulatis emarginatis; interioribus subrotundo-ovalibus majoribus.

Iris Swertii. Lam. dict. 3. p. 296. ill. 1. p. 121. Vahl. enum. 2. p. 130. Persoon syn. 1. p. 51. Rœm. et Schult. syst. 1. p. 461. Redouté liliac. 6. t. 306.

I. aphylla γ. Ker in bot. mag. t. 870.

I. latifolia minor oris cœruleis, et eadem oris dilatè purpureis. Tournef. inst. 1. p. 358.

I. alba, oris cœruleis. Swert. florileg. t. 41. f. 1.

The whole herbage is of a glaucous hue. *Root* thick, fragrant. *Stem* erect, round, from a foot to 18 inches high, bearing about 3 flowers, and rather longer than the leaves. *Leaves* broadly exsiform, slightly falcate, an inch or more in width. *Flowers* sessile, or nearly so, about half the size of *I. germanica*, white, and marked, especially at the borders, with numerous contiguous transverse streaks, of a pale purple or violet. *Spathes* oblong-lanceolate, acute, thin and scarious, white, as long as the tube of the perianthium, which is angular, green, marked with purple lines, and about the length of the ovarium. Outer segments of the perianthium oblong-spathulate, recurved and spreading, plaited and waved at the border, slightly notched at the top, furnished at the claw with copious, erect, white hairs, tipped with yellow; the 3 inner segments are broadly elliptical, with a contracted claw, the edges more wavy and recurved. *Filaments* blue. *Anthers* linear-oblong, pale yellow. *Ovary* oblong, with 3 blunt angles. *Stigmas* violet, cloven,

with pointed entire lobes, the outer lip very short, truncate, emarginate and slightly revolute.

A very elegant *Iris* long cultivated in the gardens, but of its origin and native country nothing certain is known. It is very nearly related to *germanica*, from which it is chiefly distinguished by the smaller size of all its parts, and by the narrower and wavy segments of its perianthium. We have not remarked whether the flowers are fragrant.

Mr. Bellenden Ker has proposed to combine *plicata*, *nudicaulis*, and the present under the name of *aphylla*; but, although we are disposed entirely to concur in this view of our acute and learned friend, we have followed Lamarck for the present, being convinced that the whole genus requires a thorough revision from a comparison of living specimens, to settle, on satisfactory principles, the limits of the species; and we are the more induced to take this course, as the name of *aphylla* must be dropt; that ambiguous species having been entirely taken up by Linnæus from Caspar Bauhin, whose *Iris latifolia*, *caule aphylo*, evidently refers either to *germanica* or *pallida*.

Mr. William Swainson, who has devoted considerable attention to the study of this genus, has recognized three distinct types or forms, the European, Asiatic, and American, which, with few exceptions, appear to be perfectly natural.

Our drawing was taken from a specimen that blossomed at Mr. Knight's Nursery, in May last. *D. Don.*



1. Stamen. 2. Pistil. 3. Ovarium separate.



NIEREMBERGIA aristata.

Bristle-pointed Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANÆÆ. Brown prodr. 1. p. 443.

NIEREMBERGIA. Suprà fol. 173.

* *Corollæ tubo filiformi, faucibus coarctatis, staminibus erectis subæqualibus summo tubo insertis, stigmate complanato. Nierembergiæ propriæ.*

N. aristata, glabriuscula; foliis linearibus acuminatis, calyce subulato aristato corollæ tubo brevior, stigmate peltato!

The whole plant sparingly clothed with minute pubescence, of a pale green. *Stems* slender, filiform, wiry, glossy, from 3 to 9 inches high, much branched, and spreading. *Leaves* narrow, linear, bristle-pointed, recurved, channelled above, from 1 to 2 inches long; the lower ones spatulate, mucronulate, flat, shorter. *Flowers* the largest of this section, placed singly opposite the leaves, and arranged in the form of a raceme. *Peduncles* filiform, half an inch long. *Calyx* tubular, turbinate, 10-ribbed, the interstices membranous; segments linear-subulate, acuminate, bristle-pointed, recurved, harsh and rigid to the touch, shorter than the tube of the corolla. *Corolla* white, suffused with purple, with the mouth of a deeper colour, exteriorly glandular; tube filiform, rather exceeding an inch in length; limb spreading, 5-lobed, plaited, concave, an inch and a half in diameter; lobes rounded, slightly crenulate at the margin, the lower one larger. *Stamens* 5, about equal, inserted in the mouth of the tube, approximate around the stigma. *Filaments* linear, white, sparingly glandular. *Anthers* yellow, bilocular, the cells opening lengthways, and divergent at the base. *Style* slender, capillary, smooth, attenuated at the base. *Stigma* orbicular, peltate, convex, viscid, and slightly

2-lobed above. *Ovarium* bilocular, obsoletely 4-sided, surrounded at the base by a cup-shaped slightly crenulate disk. *Ovula* numerous, attached to two fleshy placentæ.

A native of sandy plains on the banks of the Parana, where it was discovered by Mr. Tweedie, and from seeds transmitted by him to Mr. Neill, the plant was raised in the garden at Canonmills in 1832. The drawing was taken by our friend Mr. James M'Nab in the month of August last year. In habit it comes very near to *gracilis* and *filicaulis*, but is essentially distinguished from these, as well as from every other species of this section, by its broad orbicular, not compressed stigma, which is entirely that of the section *Petunia*. The form of the corolla is but a character of secondary importance among the *Solaneæ*, as is evinced by the variety which occurs in *Solanum*, *Nicotiana*, and in others of the larger genera.

We have remarked in this species, as well as in *filicaulis* and *gracilis*, that one of the lobes of the anthers is occasionally abortive.

The plant thrives best in a mixture of peat and sand, and roots freely at every joint, if the branches are allowed to lie on the surface of the earth.

For the meaning of the generic name, see fol. 172. *D. Don.*



1. Outline of a radical leaf. 2. Stamen with a portion of the Corolla. 3. Pistil.



CAMPANULA divergens.

Spreading Bell-flower.

Linnean Class and Order. PENTANDRIA MONOGYNIA.
Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.
CAMPANULA. *Suprà fol.* 80.

C. divergens, biennis, hispido-pilosa; floribus racemoso-paniculatis nutantibus, laciniis calycinis lanceolatis acutis erectis: appendicibus ovatis obtusis ovario brevioribus, corollâ campanulatâ, foliis oblongis obtusis crenulatis.

Campanula divergens. *Willd. enum.* 1. p. 212. *Horn. hort. hafn.* 1. p. 201. *Rœm. et Schult. syst.* 5. p. 146. *Spreng. syst.* 1. p. 733. *Alph. Decand. monogr.* p. 243.

C. spathulata. *Waldst. et Kit. pl. rar. hung.* 3. p. 286. t. 258.

C. cernua. *Balb. cat. hort. taur. ann.* 1813. p. 20.

Plant clothed with short bristly white hairs. *Root* annual. *Stem* about a span high, erect. *Branches* spreading, angular, purple. *Leaves* sessile, oblong, obtuse, wavy, and repandly crenate at the edges, scabrous, an inch or more in length, paler beneath; *radical* ones longer and flatter, spathulate, attenuated at the base into a sort of footstalk. *Flowers* numerous, drooping, in a racemose panicle. *Peduncles* an inch long, angular, flexuose, purple. *Bractes* lanceolate, acute, hispid, wavy and recurved. *Calycine segments* lanceolate, acute, erect, the borders recurved, and fringed with white hairs, the sinuses produced into ovate, obtuse, fringed, reflexed, leafy lobes. *Corolla* an inch long, or rather more, tubular-campanulate, of a deep violet, thrice longer than the calyx, glabrous and glossy exteriorly, the inside clothed with shaggy hairs, with 5 semi-ovate, mucronulate, spreading lobes. *Stamens* 5, inclosed. *Filaments* slender, with broad, ovate, acute, connivent, bearded, white bases. *Anthers* linear, yellow. *Style* twice as long as the stamens, cylindrical, purple, the upper half clothed with papillose hairs. *Stigma*

composed of 3, semicylindrical, blunt, revolute, densely papillose, greenish yellow lobes. *Ovarium* turbinate, 3-celled, irregularly angular, the angles hispid. *Disk* flat, yellow, fleshy, viscid. *Ovula* numerous, compressed.

Not surpassed in beauty by *C. Medium*, which it resembles in habit, and by several botanists it has even been regarded as the normal state of that species. It occurs wild in Hungary, Transylvania, the Bannat of Temeswar, and also in Siberia. It was first taken up by Willdenow in his enumeration of the plants cultivated in the Royal Gardens at Berlin, and is principally distinguished from *C. sibirica* by its more branching habit, less wavy leaves, and larger flowers.

Our drawing was taken from a very fine specimen which blossomed in Mrs. Marryat's collection in the beginning of June, and which could not have borne less than from 50 to 60 flowers. The plant delights in a light gravelly, or chalky soil, and produces its seeds abundantly. It occurs frequently in gardens under the name of *pulcherrima*, but whether it is identical with the plant so called by Schrank we are uncertain. *D. Don.*



1. Stamens and Pistil. 2. Stamen separate.





Strophosiphon umbellatus (L.) Griseb. f. *umbellatus* Griseb.

LUPINUS nanus.

Dwarf Lupine.

Linnean Class and Order. DIADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. *Juss. gen. p.* 345.

LUPINUS. Suprà fol. 12.

L. nanus, hirsutus; foliolis subseptenis lineari-lanceolatis acutiusculis canaliculatis, calycis labio inferiore emarginato; superiore bipartito, leguminibus glabris.

Lupinus nanus. *Dougl. Mss. Benth. in hort. trans. v.* 1. *n. s. p.* 409. *t.* 14. *f.* 2.

Root fibrous, annual. *Stem* about a span high, slightly branched at the base, filiform, hollow, clothed, like the rest of the plant, with long, white, simple, spreading hairs. *Leaves* composed of, from 5 to 7, linear-lanceolate, channelled, hairy leaflets, with a sharp recurved point, scarcely an inch long, attenuated at the base. *Footstalks* about an inch and a half long, filiform, hairy, broader and compressed at the base. *Stipules* linear, hairy, erect, attenuated, but scarcely pointed at the top, dark purple, inclining to black, about 3 lines in length. *Flowers* in distant whorls, of about 5 together, on short cylindrical purple pedicels, and disposed in a loose terminal raceme of 2 or 3 inches in length. *Bractes* lanceolate, rather blunt, concave, membranous, very hairy, longer than the calyx, and having a persistent callous articulated base. *Calyx* of 2 lips, membranous, hairy, purplish; upper lip deeply cloven, with pointed segments; lower one emarginate. *Corolla* the wings broad, of an azure blue, folding over the keel, which is white, acuminate, and fringed at the upper edges with silky hairs, the point greenish and shaded with a livid purple; vexillum rounded, truncate, with the sides azure, shaded with purple, and folded back, the disk white, marked with a few linear spots of dark purple. *Sta-*

mens monadelphous. *Filaments* pale green. *Anthers* orange, of the 5 shorter stamens linear, with parallel cells, of the longer 5 nearly reniform. *Ovarium* glabrous, compressed, shining. *Style* awl-shaped, glabrous. *Stigma* fringed with white hairs.

This pretty little Lupine was gathered in California by Mr. Douglas, and by him introduced to the garden of the Horticultural Society, whence seeds have been distributed to various collections.

Our drawing was taken at Mr. Knight's Nursery, in the latter end of May.

The plant is a hardy annual, thriving in any light soil, and is found to produce seeds freely.

For the explanation of the generic name, see fol. 12.
D. Don.



1. Wings. 2. Keel. 3. Stamens and Pistil. 4. Pistil separate.





Phoradendron villosum (L.) S. Wats. 11024

RHODODÉNDRON ferrugineum; var. album.

White-flowered Rusty-leaved Rosebay.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. ERICACEÆ.

Trib. 2. RHODOREÆ. D. Don in edinb. phil journ. July, 1834.

RHODODÉNDRON. Suprà fol. 10.

* *Calycis limbo abbreviato. Corolla tubuloso-campanulatâ. Stamina 10. Folia sempervirentia, coriacea. Normales.*

R. ferrugineum, foliis glabris subtùs leprosis, corollis infundibuliformibus.

Linn. sp. pl. p. 562. Mill. dict. n. 2. Jacq. obs. 1. p. 26. t. 16. fl. austr. t. 255. Scop. carn. n. 479. Willd. arb. 284. sp. pl. 2. p. 603.

R. foliis ellipticis, glabris, subtùs rubiginosis. Hall. helv. n. 1015.

Azalea maculis ferrugineis subtùs adspersa, floribus decandris. Lemonier. Sauv. monsp. p. 57.

Ledum alpinum, foliis ferreâ rubigine nigricantibus. Bauh. pin. p. 468. Raii hist. p. 1005.

Euonymus Theophrasti. Dalech. hist. p. 271.

Chamærhodendros montana Allobrogum lentiscifolia. Lob. ic. p. 366.

β. album, floribus niveis.

A very dwarf shrub, scarcely more than a foot high. *Branches* glabrous, covered with a pale yellow bark. *Leaves* oblong-lanceolate, obtuse, with a minute yellow glandular point, glabrous shining, pale green, and veiny above, covered beneath with rusty brown scales. *Corolla* pure white, tubular, with oblong, blunt, wavy, spreading, equal lobes. *Filaments* awl-shaped, glabrous, white. *Anthers* orange yellow. *Style* glabrous, greenish yellow.

We are indebted to Mrs. Marryat for the opportunity of publishing a figure of this very delicate and scarce variety of an old inhabitant of the gardens.

The plant whence our drawing was taken, blossomed in the beginning of June last, and we had never before remarked

the variety in any other collection, except in that of the above-mentioned lady. It had probably been originally obtained from the Pyrenees, where, according to the accurate Bauhin, the white variety is frequent.

The generic name will be found already explained : fol. 10. *D. Don.*



1. Stamen. 2. Pistil.





PENSTEMON speciosus.

Showy Penstemon.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. CHELONEÆ.

PENSTEMON. Suprà fol. 211.

P. speciosus, glaberrimus ; foliis integerrimis ; radicalibus spathulatis ; caulinis superioribus sessilibus lineari-oblongis obtusis, corollæ fauce prominenti nudâ, filamento sterili elongato imberbi.

Penstemon speciosum. *Dougl. Mss. Lindl. in bot. reg. t. 1270.*

Plant perennial, herbaceous, perfectly glabrous. *Stem* upright, rather stiff, about 3 feet high, obsoletely four-sided, of a pale glaucous green, but occasionally shaded with purple. *Leaves* rather fleshy, coriaceous, obtuse, entire, 3 or 5 inches long, dark green and glossy above, paler beneath ; the lower ones spathulate or lanceolate, flat, attenuated at the base, with linear, bluntly keeled petioles, of an inch or two in length ; upper ones sessile, broadly linear, 5 or 6 inches long, scarcely an inch wide, concave, and occasionally folded above, furnished below with a prominent midrib, the edges cartilaginous and somewhat waved. *Flowers* disposed in a long, terminal, loose, racemose panicle, with the branches in distant pairs, and bearing from 7 to 11 blossoms. *Peduncles* angular, glabrous, an inch long. *Calyx* of 5, ovate, acuminate, imbricate, glabrous segments, having the edges white and rather membranous ; the upper one broader, recurved. *Corolla* perfectly glabrous and glossy, both within and without, rather stiff, about 2 inches long, and of a brilliant cobalt blue ; tube nearly cylindrical, longer than the calyx ; faux inflated, white below, convex above ; lower lip of 3 reflexed lobes, with the edges wavy and folded back, the upper part within prominent and purple ; upper lip of 2 broader, connivent, recurved lobes ; lobes rounded, quite en-

tire. *Stamens* 4 fertile, didynamous. *Filaments* compressed, arched, white, stained with purple, the lower pair longest; sterile one straight, as long as the shorter pair, white, glabrous, with a pale blue compressed, cuneate apex. *Ovarium* ovate, oblong, green, shining. *Style* slender, filiform, deep purple. *Stigma* small, blunt, white.

By far the most beautiful of this showy genus, discovered by Mr. Douglas on the banks of Spoken river in North-west America, and introduced by him to the garden of the Horticultural Society, in 1827. The plant is still rare in collections, from the sparing manner in which it affords slips, and from its seeds being seldom matured, except under favourable circumstances. It is found to succeed best in a mixture of peat and loam, and continues in flower the greater part of the summer.

Our drawing was taken from a plant which blossomed in Mrs. Marryat's Collection in June last.

The generic name is derived from *πεντε*, five, and *στημων*, stamen, from the presence of the rudiment of a fifth stamen.
D. Don.



1. Outline of radical leaf. 2. Lower cauline leaf. 3. Portion of the corolla with the sterile stamen. 4. Fertile stamens. 5. Pistil.



the fruit of the plant

the fruit of the plant

ÉBENUS crética.

Cretan Ebony.

Linnean Class and Order. DIADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. *Juss. gen. p. 345.*

EBENUS. *Calyx* persistens, ultra medium 5-fidus, tubo demùm subventricoso, laciniis lineari-subulatis corollam æquantibus. *Corollæ alæ* minimæ tubo calycis ferè breviores. *Stamina* monadelpha. *Legumen* subrotundum, 1-2-spermum.

Folia sæpiùs pinnata cum impari sessili. Stipulæ a petiolo distinctæ. Pedunculi axillares elongati. Spicæ densæ. Flores rubelli. Genus ab Anthyllide distinctum alis minimis, laciniis calycinis longioribus et habitu ferè Onobrychidis. Decand. prodr. 2. p. 350.

E. cretica, fruticosa, foliis rariùs 3-foliolatis sæpiùs pinnatis bijugis cum impari sessili, foliolis oblongo-linearibus, stipulis connexis et ideò bifidis oppositifoliis, spicis ovato-cylindræis. *Decand. l. c. 2. p. 350.*

Ebenus cretica. Linn. sp. pl. p. 1076. Prosp. Alpin. exot. p. 279. t. 278. G. Don. syst. gard. and bot. 2. p. 309.

Anthyllis cretica. Lam. dict. 1. p. 203. Willd. sp. pl. 3. p. 1019. Sims in bot. mag. t. 1092.

A. fruticosa, foliolis ternatis ac quinatis lanceolatis tomentosis. *Sauv. monsp. p. 237.*

Trifolium spicis ovatis villosis, caule fruticoso. *Roy. lugdb. p. 380.*

Barba jovis Cytisi folio, flore rubello. *Barr. ic. t. 377 et 913.*

Loto affinis alata, folio et facie pentaphylloides fruticosi, floribus in spicam longiorem positis. *Pluk. alm. p. 227. t. 67. f. 5.*

Cytisus incanus creticus. Bauh. pin. p. 390.

A small bushy evergreen shrub, from a foot to 13 inches high, the younger parts silvery, with copious adpressed silky hairs. *Branches* angular. *Leaves* stalked, ternate or quinate. *Leaflets* oblong-spathulate, mucronulate, flat, an inch long, obscurely nerved below, the lateral ones seated on very short, pale green, partial stalks, which are jointed at the base. *Petioles* persistent, narrow, channelled above, convex beneath, broader at the base, from half an inch to an inch in length. *Stipules* 2, concrete, persistent, membranous, sca-

riose, partially enveloping the branch, terminating in a long bristle-shaped point. *Spikes* axillary, solitary, stalked, ovate-oblong, erect, about 3 inches long. *Flowers* sessile, scattered. *Bractes* ovate, concave, persistent, scariose, shorter than the calyx, furnished with a long, slender point. *Calyx* companulate, membranous, with 5 long, slender, awl-shaped, feathery, nearly equal teeth, exceeding the corolla in length. *Corolla* of a lake red. *Verillum* broad, obcordate, with folded sides, and marked with deeper coloured veins, with a whitish cucullate base. *Keel* compressed, hollow, saccate, truncate and notched at the top, auriculate at the base, formed of 2 concrete petals. *Wings* very short, nearly abortive, dolabriform, truncate. *Stamens* diadelphous, nearly equal. *Filaments* glabrous, almost white. *Anthers* oblong, orange. *Ovarium* round, slightly compressed, copiously silky. *Style* slender, capillary, glabrous. *Stigma* a minute dot. *Pod* enclosed in the calyx, with one, or more rarely 2 seeds.

A very elegant little shrub, with much the habit of an *Onobrychis*, and well suited to ornament rockwork, being found to be perfectly hardy, and growing in almost any kind of light of earth. It is increased by seeds and cuttings.

The plant is abundant on the Sphachian mountains, in Candia, and was sent to Prosper Alpinus by a correspondent in that Island, as the *Ebenus fruticosa* of Theophrastus, which most probably meant the *Medicago arborea*. The ebony of commerce is well known to be the wood of *Diospyros Ebenum*. D. Don.



1. Calyx and bracte. 2. Stamens. 3. Pistil.



... .. *L. ...* 1884

RHODODÉNDRON macranthum.

Large-flowered Chinese Rosebay.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. ERICACEÆ.

Trib. 2. RHODOREÆ. *Don in edinb. phil. journ. July, 1834, p. 152.*

RHODODENDRON. Suprà fol. 10.

R. macranthum, pentandrum, appressè setosum; foliis obovato-oblongis planis nitidis, laciniis calycinis lanceolatis acutis inciso-dentatis! pilosis, corollâ tubuloso-campanulatâ glabrâ.

Rhododendron macranthum. *G. Don syst. gard. & bot. 3. p. 846.*

Azalea macrantha. *Bunge enum. pl. chin. in act. petrop. 1833. p. 115.*

A. indica; *lateritia.* *Lindl. in bot. reg. t. 1700.*

A procumbent shrub, dividing at the base into a number of long, naked stems, clothed with a pale brown deciduous bark, terminated by a bundle of 10 or 12 branches, which are again subdivided in the same manner. *Leaves* obovate, or spatulate, stalked, attenuated at the base, rather membranous, spreading varying from half an inch to an inch and a half long, dark green and shining above, paler beneath, and, as well as the branchlets, thinly clothed, on both sides, with adpressed, rufous, shining, bristly hairs. *Flowers* solitary or in pairs, terminating the branches. *Peduncles* rather thick, cylindrical, as well as the bractes, densely hairy, about half an inch in length. *Calyx* of 5 lanceolate, acute, deeply-toothed, recurved, leafy segments, clothed exteriorly with silvery hairs, the inner surface naked. *Corolla* large, broadly funnel-shaped, of a deep salmon colour; tube short, with 5 blunt angles; limb spreading, about 2 inches across, with 5 oblong-elliptical, obtuse, entire, recurved, wavy lobes, the upper one marked with spots of a deeper colour. *Stamens* 5, rather shorter than the corolla, declinate. *Filaments* slender, cylindrical, glabrous, the colour of the corolla. *Anthers* short,

almost black. *Ovarium* hairy, 5-celled. *Style* about as long as the stamens, declinate, filiform, glabrous. *Stigma* capitate, viscid.

A remarkably showy species but recently introduced from China, and distinguished from *R. indicum* by the reduced number of its stamina, by its lanceolate, acute, deeply-toothed calycine segments, and by its smaller obovate or spatulate leaves, characters which appeared to us to be uniformly constant in all the specimens that we examined. The natural habit of the plant appears to be procumbent, and its flowers continue to be produced for a longer period than in any other species. The later flowers are frequently four-cleft and tetrandrous.

We have seen no authentic specimen of the *Azalea macrantha* of Bunge, but we feel pretty certain of the identity of the two plants. The leaves in this, as in several of the allied species, are often approximated in twos or threes, but never really opposite. Our drawing was derived from a plant which blossomed at Mr. Tate's Nursery, Sloane-street, Chelsea, in June last. It requires the same treatment as the other Chinese kinds, and may be increased by layers or by cuttings. The generic name will be found explained at fol. 10. *D. Don.*

1. Calyx & Pistil.





• H. Smith, 1881

• H. Smith, 1881, mostly for 1881

CALCEOLARIA crenatiflora;
var. knypersliensis.

Knypersley Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ.

Trib. 5. CALCEOLARIÆ.

CALCEOLARIA. Suprà fol. 220.

C. crenatiflora, herbacea, perennis; foliis ovato-oblongis rugosis hirsutis grossè dentatis, floribus corymbosis, laciniis calycinis latè ovatis ovarioque glandulosis, corollæ labio inferiore subrotundo inflato crenato.

Calceolaria crenatiflora. *Cavan. ic. 3. p. 28. t. 446.* *Hooker in bot. mag. t. 3255.* *Lindl. in bot. rev. t. 1009.*

C. anomala. *Perceon syn. 1. p. 16.*

C. pendula. *Sweet suprà fol. 155.*

β. *knypersliensis*, corollæ labio inferiore anticè toto ferè fulvo-purpureo.

Stem about a span high, filiform, clothed with glandular pubescence. *Leaves* broadly ovate-oblong, spreading, stalked, attenuated at the base, veiny and wrinkled, about a span long, 3 or 4 inches broad, coarsely and unequally toothed, hairy on both sides, ribbed and paler below. *Flowers* copious, corymbose. *Bractes* ovate-oblong, acute, entire. *Pedicels* filiform, an inch or an inch and a half long, copiously glandular, as well as the calyx, which has 4 broadly ovate, slightly acute segments. *Corolla* of a bright yellow; lower lip large, orbicular, with 3 or 5 indentations, having a large patch of a chocolate brown; upper lip short, helmet-shaped, truncate with a brown border, folded over at the edges; mouth also of a chocolate brown. *Filaments* very short, stout, glabrous, white. *Anthers* cream-coloured. *Ovarium* short, conical, green, copiously glandular. *Style* about the length of the ovarium, compressed, glabrous. *Stigma* truncate.

This fine variety is a hybrid offspring between *C. crenatiflora* and *atrosanguinea*, and was raised by my brother, Mr. P. N. Don, at Knypersley Hall, Staffordshire, the seat of James Bateman, Esq. My brother states it to be of more robust growth than *crenatiflora*, with shorter and rounder flowers. He finds it to grow well in a mixture of leaf mould and sand, and that, like the rest of the genus, it loves the shade.

It can only be increased by slips. The generic name is explained at fol. 220. *D. Don.*

1. Calyx & Pistil. 2. Portion of the corolla with the stamens.



W. Smith del. J. H. Johnson sculp. Bot. Beechey. Bot. Beechey. Bot. Beechey.

SILÈNE chloræfolia.

Chlora-leaved Catchfly.

Linnean Class and Order. DECANDRIA TRIGYNIA.
Natural Order. CARYOPHYLLÆ. *Juss. gen. p.* 299.
SILÈNE. *Suprà fol.* 40.

S. chloræfolia, perennis, glabra, glauca; foliis inferioribus spathulatis acuminatis; superioribus cordatis amplexicaulibus, calycibus clavatis lævibus, petalorum laminis cuneatis dilatatis appendicibusque bipartitis.
Silene chloræfolia. *Smith ic. ined. t.* 13. *Willd. sp. pl. 2. p.* 707. *Sims in bot. mag. t.* 807. *Marsch. & Bieb. fl. taur. cauc. 1. p.* 341. *Decand. prodr. 1. p.* 381. *G. Don syst. gard. & bot. 1. p.* 12.
Lychnis orientalis viscosa, *Centaurei lutei folio*, flore longissimo. *Tournef. cor. p.* 24.

Plant perennial, slightly suffrutescent, glabrous, glaucous. *Stems* many, dichotomously branched, erect, geniculate, a span to a foot high; joints swollen, somewhat spherical; the interstices filiform, about 2 inches long. *Leaves* the lower ones and those of the barren shoots stalked, spathulate, plain, rather fleshy, about an inch and a half long, terminated by a long, sharp, occasionally twisted point; upper ones broadly ovate, acuminate, sessile, the uppermost cordate, acuminate, slightly waved, and embracing the stem. *Peduncles* about 2 inches long, filiform, single-flowered, viscid; *Calyx* clavate, about an inch long, with 10 obsolete angles, membranous, pale green, faintly stained with purple, with 5 erect, ovate teeth, having a broad scariose white border. *Petals* 5, glabrous, of a clear white above, the underside of a pale, livid purple; claws linear, green, considerably longer than the calyx; lamina divided into 2 broadly cuneate entire even lobes. *Coronal appendages* of 2 oblong blunt entire segments. *Filaments* 10, glabrous, with attenuated purple points. *Anthers* linear, incumbent, white. *Ovary* oblong-cylindrical, green trilocular, but slightly attenuated at the top,

scarcely longer than the torus. *Styles* 3, filiform, glabrous. *Stigmata* twisted, spreading, longitudinally papillose, purple. *Torus* half an inch long, cylindrical, green.

A native of Georgia and the Eastern Caucasus, and frequent in stoney places on the slopes of hills about Tiflis. It was originally taken up by Smith from a specimen gathered by Tournefort in Armenia. Although long ago introduced to the gardens, it is by no means so common as it deserves to be. It is a hardy perennial, delighting in a light loamy soil, and from its habit admirably suited for a rock-work. Its large white blossoms, which expand only in the evening, or in cloudy weather, are produced during the greater part of the summer. The plant is readily increased either by cuttings or seeds.

Our drawing was taken at the Chelsea Botanic Garden, in June. For the explanation of the generic name see fol. 40. *D. Don.*



1. Petal 2. Stamens & Pistil.



W. H. H. 1854

W. H. H. 1854

GILIA tricolor.*Three-coloured Gilia.**Linnean Class and Order.* PENTANDRIA MONOGYNIA.*Natural Order.* POLEMONIACEÆ. *D. Don in edinb. phil. journ.* 1822. p. 56.*GILIA.* Suprà fol. 218.*G. tricolor*, foliis bipinnato-partitis: segmentis subulatis, floribus corymboso-paniculatis, corollâ calyce duplò longiore: laciniis apiculatis, antheris cordatis muticis.*Gilia tricolor.* *Bentham in bot. reg. fol.* 1822. *ad calcem. et in trans. hort. soc. n. s. 1. t. 18. f. 3.* *Lindl. in bot. reg. t.* 1704.

β. Floribus albicantibus.

Stem much branched, from 3 to six inches high, copiously furnished, like the rest of the plant, with short glandular hairs. *Leaves* scattered, about an inch long, bipinnately divided, with awl-shaped pointed segments. *Flowers* arranged in a loose corymbose panicle. *Filaments* cylindrical, copiously glandular. *Calyx* tubular, with ovate-lanceolate, acuminate, spreading teeth, the sinuses white and scariose. *Corolla* funnel-shaped, twice the length of the calyx; tube yellow, with a pale, almost white, expanded base; throat somewhat campanulate, of a deep purple; limb concave, with a white ground, shaded more or less with blue, the lobes broad, rounded, cuneiform, mucronulate, traversed by numerous parallel branched nerves. *Stamens* 5, inserted just below the sinuses of the limb; free part of the filaments slender, awl-shaped, glabrous, nearly white. *Anthers* cordate, blunt, erect, blue. *Ovary* oblong, 3-sided, 3-celled. *Ovules* numerous, angular. *Style* filiform, slender. *Stigmata* 3, semi-cylindrical, obtuse, recurved, copiously papillose along their inner surface.

A very pretty annual, discovered by Mr. Douglas, in California, and introduced by him to the garden of the Horticultural Society, in 1833, whence seeds have been liberally distributed to various collections. The plant is quite hardy, and as it perfects its seeds freely, we hope soon to see it as common an ornament to the flower border as its less showy congener *Gilia capitata*.

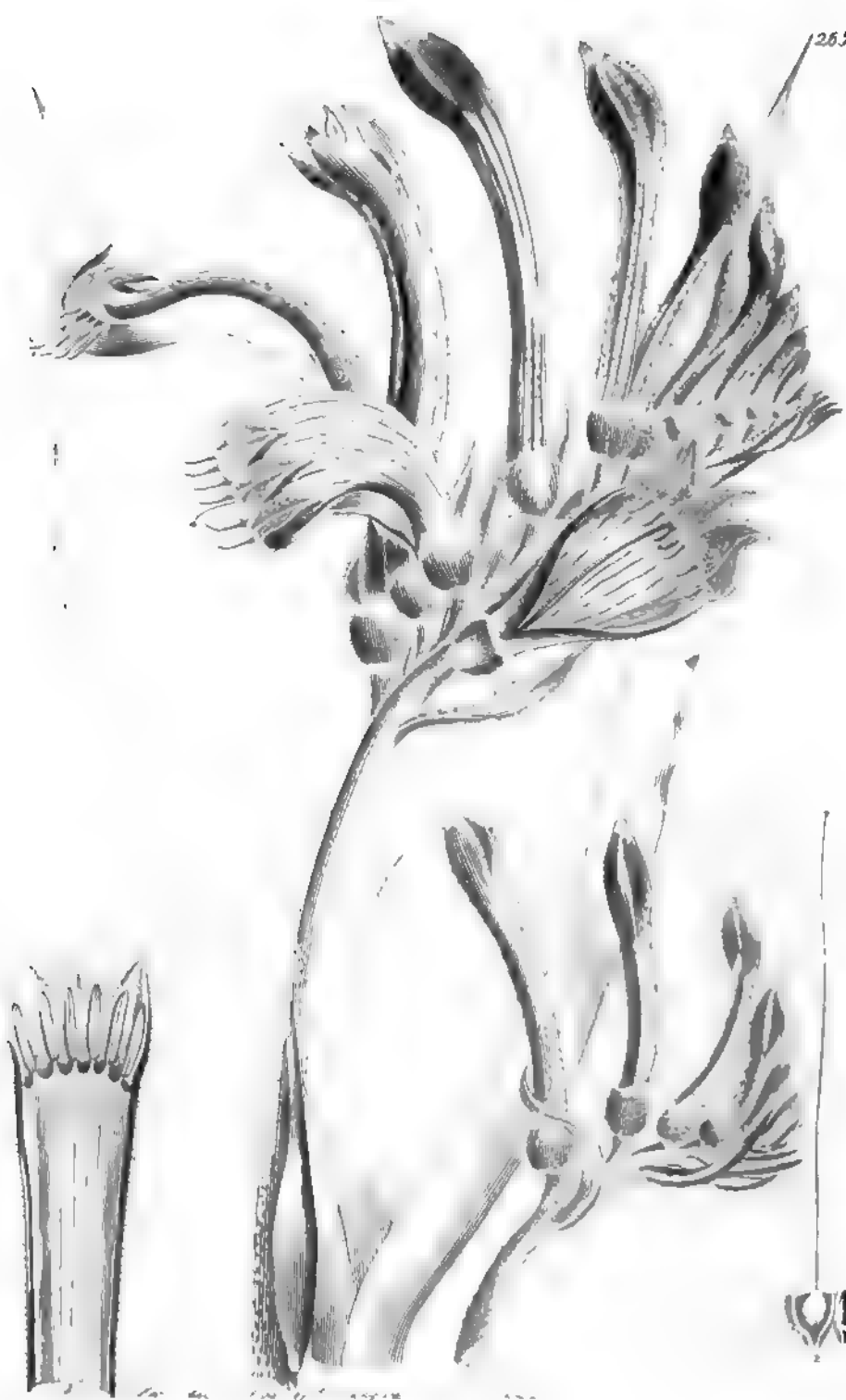
Our drawing was taken about the end of June last, at the Nursery of Messrs. Allen and Rogers, at Battersea, where there was also a white variety of the same species, a portion of which is represented in our plate. We have remarked that the flowers have often the rudiments of 5 sterile stamina alternating with the fertile ones.

It will thrive in any light soil, and requires to be treated like other hardy annuals.

The generic name is already explained at fol. 218. *D. Don.*



1. Corolla laid open. 2. Pistil. 3. White variety.



ANIGOZANTHOS Manglèsii.

Mr. Mangles's Anigozanthos.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. HÆMODORACEÆ. *Brown prodr.* l. p. 299,

ANIGOZANTHOS. *Perianthium* superum, coloratum, tubulosum, lanatum pilis ramulosis, limbo 6-fido, laciniis subæqualibus, suprà secundis; tardiùs deciduum. *Stamina* 6, fauci inserta, adscendentia. *Antheræ* erectæ. *Ovarium* 3-loc., loculis polyspermis. *Stylus* filiformis, deciduus. *Stigma* simplex. *Capsula* 3-loc., apice dehiscens. *Semina* numerosa.

Herbæ perennes. *Radix fasciculato-fibrosa fibris crassis.* *Caulis integer v. suprà divisus.* *Folia ensiformia, aversa, basibus semivaginantibus.* *Flores subcorymbosi, e spicis brevibus, bracteis sub-oppositifloris.* *Brown l. c. l. p. 301.*

A. Manglèsii, caule tomento persistenti longitudinaliter vestito, antheris muticis filamento 5-plò longioribus, stigmate capitato.

Plant perennial, tufted. *Root*, composed of numerous thick fibres. *Leaves* uniform, erect, of a glaucous green, glabrous, even and entire at the edges, terminated by a sharp, brown, rigid point, varying from half a foot to 18 inches in height; and from half an inch to an inch in breadth. *Stem* erect, branched, cylindrical, from 2 to 3 feet high, clothed with a short, thick, crimson, persistent down, resembling velvet, and composed of branched hairs. *Flowers* arranged in short, terminal, spiked racemes. *Peduncles* very short, round, and, as well as the base of the perianthium, clothed with crimson down. *Perianthium* tubular, cylindrical, 2 or 3 inches long, often splitting longitudinally, thickly covered with short branched hairs of a green colour, except at the base, which is slightly swollen and rounded, and at the limb where they assume a yellow tint: limb erect, white above, divided into 6 ovate-lanceolate, pointed, equal segments, frequently united in pairs. *Stamens*

6, equal, inserted into the mouth of the tube, the united bases of the filaments apparently constituting the lining of that organ, the free portion very short, glabrous, flat, and dilated towards the base. *Anthers* linear, blunt, slightly recurved, bilocular, orange, five times longer than the free portion of the filaments, the cells attached along the inside, and opening lengthways. *Ovarium* globular, 3-celled, slightly adherent to the tube of the perianthium, the ovules numerous in each cell, attached to a longitudinal placenta. *Style* slender, filiform, glabrous. *Stigma* capitate, projecting considerably beyond the mouth of the tube.

This singularly beautiful species of *Anigozanthos* was raised in the garden at Whitmore Lodge, Berks, the seat of Robert Mangles, Esq. from seeds brought from Swan River by Sir James Stirling, the enterprising governor of that colony, by whom they had been presented to Mr. Mangles.

The greater length of the anthers, and the capitate stigma, essentially distinguish it from the rest of the genus.

We are indebted to Mr. Donald Mackay, Mr. Mangles' intelligent gardener, for the following particulars relative to its culture.

"The seeds were sown in August, 1833, and the young plants were potted off, and kept in an airy part of the greenhouse during winter. Early in the spring they were repotted, and in April they were planted out in a border composed of maiden loam, leaf mould, and bog earth, in equal proportions, with a slight mixture of pounded chalk, in which the plants were found to thrive amazingly, shewing flower at the age of ten months. I have tried them in bog earth alone, the same as we use for Heaths, but it will not do for them. A cold frame will protect them well enough in the winter. The slugs are fonder of it, than of any other plant that I am acquainted with." The plant affords offsets freely, and is therefore easily multiplied.

The generic name is compounded of *ανιχω* to elevate, and *ανθος* a flower, from its flowers being elevated on a naked stem.—*D. Don.*



1. Corolla laid open.
2. Pistil, with the base of the perianthium.



GENISTA amxantica.

Amsantan Genista.

Linnean Class and Order. DIADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. *Juss. gen.* p. 345.

GENISTA. *Calyx* bilabiatus, labio superiore bipartito, inferiore 3-dentato, aut 5-lobus, lobis 3 infer. ad apicem, ferè coalitis. *Vexillum* oblongo-ovale. *Carina* oblonga, recta, genitalia non omnino continens. *Stamina* monadelpha. *Legumen* plano-compressum aut rariùs subturgidum, polyspermum, rariùs oligospermum, eglandulosum. *Frutices floribus flavis.* *Decand. prodr.* 2. p. 145.

G. amxantica, inermis; ramulis diffusis angulatis subvillosis, foliis ovato-lanceolatis acuminatis glabriusculis, floribus spicato-racemosis, calycibus ovarisque glabris: dentibus subulatis.

Genista amxantica. *Ten. fl. napol.* 2. p. 127. t. 66. *prodr.* p. 41. *syn.* p. 62. *Decand.* l. c. 2. p. 150. *G. Don. syst. gard. & bot.* 2. p. 152.

A spreading decumbent shrub, sending forth many stems of about 2 feet in length, with angular, leafy branches, which are glabrous, or slightly hairy, especially the younger ones, and occasionally of a dull purple hue. *Leaves* simple, ovate-lanceolate, acute, veiny, varying from half an inch to an inch in length, dark green, and shining on both sides, mostly glabrous, but occasionally sparingly hairy. *Petioles* extremely short, flat, dark purple. *Stipules* minute, lanceolate, acuminate, membranous, purplish. *Flowers* numerous, of a rich golden yellow, disposed in a terminal spiked raceme. *Pedicels* very short, dark purple. *Bractes* linear-lanceolate, pointed about as long as the calyx. *Calyx* tubular, glabrous, membranous, green, stained with purple, with 5 awl-shaped teeth, of which the upper pair are rather shorter and broader.

Petals 5, about equal in length, glabrous; wings oblong, rounded; vexillum rounded-oval, cucullate, keeled behind; keel oblong, blunt, the petals disunited below. *Stamens* 10, monadelphous. *Filaments* glabrous, pale yellow, 5 shorter, with linear blunt anthers, and 5 longer with cordate ones. *Ovarium* linear, compressed, glabrous. *Style* awl-shaped, glabrous, geniculate. *Stigma* terminal, blunt, minutely papillose.

Discovered by Professor Gussone, on hills in the valley of Amsanto, not far from Frigento, in the kingdom of Naples, a spot famous for its mineral springs, and for the unhealthiness of its air, arising from sulphureous exhalations.

The species is quite hardy, and from its trailing habit, and copious clusters of golden flowers, is well suited to ornament rock-work, where it will be found to thrive luxuriantly. It may be increased, either by seeds or layers.

Our drawing was taken from a plant which flowered on the rock-work in the Botanic Garden, Chelsea, in the beginning of June last.

The generic name is derived, according to some, from *genu*, the knee, from the flexibility of its branches; and by others from *gen*, a celtic word, signifying a shrub. *D. Don.*



1. Calyx, with the organs of reproduction. 2. Pistil separate.



GALARDIA picta.

Painted Galardia.

Linnean Class and Order. SYNGENESIA POLYGAMIA FRUSTRANIA.

Natural Order. COMPOSITÆ. *Adans. fam.* 2. p. 103.

Fam. X. HELIANTHÆ. *Cass. Trib.* Heleniæ.

GALARDIA. Radius neuter, semitrifidus. Rhachis tota bracteolata. Achenia turbinata, villosa. Pappi paleis 5—7, oblongis, aristatis, integris. Herbæ (Amer. bor.) canescentes, foliis inferioribus sinuato-dentatis, capitulis terminalibus solitariis pedunculatis, involucro polyphyllo laxo subæquali, radio amplo specioso, corollæ lucinis aristatis, bracteolis subulatis. D. Don MSS.

G. picta, canescens; corollæ fauce inflatâ: laciniis elongatis radiisque aristatis, bracteolis rhacheos angulatis, pappi paleis abruptè aristatis.

Root perennial. *Stem* about 2 feet high, cylindrical, marked with several longitudinal striæ, of a paler colour, pliant and flexuose, scarcely thicker than a crow-quill, clothed like the leaves with short recumbent hairs. *Leaves* pointed, rather rough, minutely dotted, pale green, with a prominent midrib, the lower ones oblong-spathulate, sinuately toothed, attenuated towards the base, a span long; upper ones shorter, strap-shaped, entire, suddenly contracted at the base, but scarcely stalked. *Capitula* terminal, solitary, stalked. *Peduncles* filiform, striated, rough, slightly hoary towards the top. *Involucrum* composed of a quadruple series of lanceolate, acuminate, bristle-pointed, hoary, spreading leaflets, ultimately becoming reflexed; the outer ones longer. *Rays* neuter, about 13 in number, broadly wedge-shaped, 3-lobed, of a deep carmine, with a bright yellow border, the lobes abruptly bristle-pointed, glabrous above, hairy beneath, about half an inch long, spreading, and overlapping each other; tube very short, slightly compressed, hairy, pale-green; nerves 7, the lateral ones branched, that occupying the axis of each lobe straight and simple, but all becoming confluent at the top. *Florets of the disk* hermaphrodite, the tube very short, narrow, glabrous, cylindrical; faux tubular-campanulate, inflated, four times longer than the tube, copiously clothed with papillose hairs, before yellowish green, afterwards becoming dark purple; the segments awl-shaped,

erect, bristly and bearded, with an ovate base. *Filaments* linear, compressed, white. *Anthers* orange, united into a tube, terminated by an ovate-lanceolate, acute, dark purple appendage, and furnished at the base with two minute teeth. *Style* cylindrical, pale green, thickened upwards, glabrous; the branches linear, compressed, recurved, channelled above, dark crimson, appendages thrice longer than the branches, awl-shaped, dark crimson, copiously bristly, recurved. *Achenia* turbinate, clothed with copious silky hairs. *Pappus* of 6 or 7 broadly oval, scariously membranous paleæ, overlapping each other, terminated by a long rough awn, shorter than the corolla. *Rhachis* convex, copiously bracteolate; the bracteolæ awl-shaped, white, with 3 or 4 sharp angles.

This very pretty species of *Galardia* was gathered in Louisiana, by Mr. Thomas Drummond, and from seeds transmitted by that enterprising collector, the plant has been raised in various gardens. Our drawing was taken from a plant which blossomed in the collection of our worthy friend Mr. Neill at Canonmills, near Edinburgh, in August last. We have likewise been favoured, by Mr. Miller, with specimens from the Bristol Nursery, in which the colour of the flowers was much richer, from the plant having been grown in the open border. It should be planted in a mixture of peat and loam, and it may be increased, either by cuttings or by seeds, which it perfects freely in the open air. It is probable that the plant will prove little more than biennial, and therefore that by seeds will be the most satisfactory mode of multiplying the species.

The triquetrous bracteolæ, abruptly pointed pappus, and the widened throat of the corolla, essentially distinguish the species. The genus, which is entirely confined to North America, is represented in the southern division of that continent by *Cephalophora*, which is principally distinguished by its entirely naked rhachis, a character which M. Lessing has erroneously attributed to the present genus, that part being thickly studded with paleæ, in *Galardia bicolor*, and the other species.

The genus was dedicated to M. Gaillard de Charentonneau, an amateur of Botany. *D. Don.*



1. Ray. 2. Floret of the disk. 3. Ovarium.

NIEREMBERGIA Atkinsiana.

Mr. Atkins's clove-scented Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANEÆ. *Brown prodr.* l. p. 443.

NIEREMBERGIA. *Suprà fol.* 172.

•• *Corollæ fauce dilatata sæpius ventricosa, staminibus inæqualibus tubo medio insertis subinclusis, stigmate capitato. Petunia.*

N. Atkinsiana, foliis ovatis acutiusculis, laciniis calycinis ligulatis, corollæ tubo calyce duplò longiore.

Stem much branched, spreading, about 2 feet high, round, green, clothed with long, soft, jointed, glandular hairs. *Leaves* alternate, or occasionally opposite, ovate, rather acute, slightly attenuated at the base, pale green, an inch and a half long, marked by several nerves, and clothed on both sides with soft, jointed, glandular hairs, the midrib purplish below; the lower ones stalked. *Flowers* solitary. *Peduncles* axillary, filiform, an inch or two in length, copiously clothed, as well as the calyx, with jointed glandular hairs; the fruit-bearing ones longer and deflexed. *Calyx* turbinate, with 10 blunt angles, the segments leafy, ligulate, blunt, unequal, thrice longer than the tube. *Corolla* funnel-shaped, with the tube an inch and a half long, ventricose above, clothed outwardly with soft, jointed hairs; limb concave, spreading, plaited, with 5 shallow, round, blunt lobes, of a brilliant purple, outside paler and livid, the inside of the tube marked with deep violet-coloured veins. *Stamens* 5, erect, 2 longer. *Filaments* slender, glabrous, white, attached to the lower part of the tube. *Anthers* pale-purple, with 2 parallel, distinct

cells, connected at the middle by a small connectivum. *Style* slender, filiform, about the length of the longer pair of stamens, pale green, thickened upwards. *Stigma* peltate, green and viscid above. *Ovarium* ovate, bilocular, surrounded at the base by a fleshy yellow ring, with 2 prominent angles. *Placentæ* 2, fleshy, green. *Ovules* numerous, white.

We are indebted to Mr. Atkins, Nurseryman, Northampton, for specimens of this very showy hybrid, raised by him between *Nierembergia nyctaginiflora* and *phaenicea*. In habit it is much like the former, but the flowers are nearly intermediate between those of the two parents.

The plant would prove a great ornament in the flower border, as it blossoms most abundantly, and is as hardy as the *nyctaginiflora*. It is readily increased by cuttings. The flowers, especially in the evening, diffuse an agreeable fragrance, resembling that of the clove pink.

The generic name is already explained at fol. 268.



1. Stamens and Pistil, with a portion of the tube of the corolla.

Corrections in Numbers for August and November.

No. 63. LOPHOSPERMUM RHODOCHITON.

Fol. 250, line 2, overleaf, add : rudiment of the fifth stamen very short, placed between the longer pair, and bearing an imperfect anther at its summit.

No. 66. GILIA TRICOLOR.

Fol. 264, line 15 from the bottom, for *filaments* read *peduncles*.



Flora of Cuba by E. C. Smith, 189. Botanical illustration of a plant.

ALSTRŒMÈRIA Salsilla.

Small-flowered Alstroemeria.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

ALSTRŒMERIA. *Perianthium* superum, 6-partitum : *segmentis* difformibus ; 3 interioribus, quarum 2 basi tubulosa aut convoluta. *Stamina* 6, inæqualia, declinata, basi laciniarum inserta. *Ovarium* adhærens, 6-gonum. *Stylus* indivisus, 3-sulcus, declinatus. *Stigmata* 3, replicata, papillosa. *Capsula* 3-locularis, polysperma : *valvis* medio septiferis. *Semina* globosa, fusca.

Herbæ (Americæ meridionalis) *perennes*, *radice fibrosâ v. tuberosâ*. *Caulis foliosus, erectus v. volubilis*. *Folia alterna, plerumque resupinata*. *Flores terminales, subsolitarii v. umbellati, colore varii, non spathacei*.

A. Salsilla, caule volubili, foliis petiolatis lineari-oblongis mucronulatis glabris, pedunculis subbifloris umbellatis, perianthii segmentis cuneatis retusis subæqualibus.

Alstroemeria Salsilla. *Linn. sp. pl.* p. 462. *amæn. acad.* 6. p. 254. (excl. *synon. Hern. mex.*) *Hooker & Arnott in Beech. voy. append.* p. 47. (excl. *synon. bot. mag.*)

A. oculata. *Lodd. bot. cab. t.* 1851. *Graham in bot. mag. t.* 3344.

Hemerocallis scandens, floribus purpureis, vulgò *Salsilla*. *Feuill. peruv.* 1. p. 713. t. 6.

The whole plant glabrous. *Stems* slender, filiform, twining, varying from a cubit to a yard in length. *Leaves* oblong, or linear-lanceolate, recurved, with a blunt cartilaginous apex, and with a narrow white membranous border, many-nerved, above perfectly smooth, and of a glossy green, glaucous beneath, and copiously besprinkled with minute whitish dots, contracted at the base into a very short footstalk, which is curled at the edges, varying from an inch to two inches long. *Flowers* small, terminal, nodding, of a red purple, disposed in umbels. *Umbels* of from 2 to 12 flowers. *Peduncles* an inch long, slender, angular, frequently forked. *Bractes* thrice shorter than the peduncles, spathulate, green, with a cartilaginous, purplish, wavy and sinuose border. *Segments of the perianthium* spathulate, unguiculate, retuse and slightly emarginate ; the 3 outer ones of a uniform purple,

erect and spreading, exceeding half an inch in length; inner ones with broader whitish claws, copiously papillose within, furnished at the base with an oblong callous pit of an olive colour, and at the disk with a large semicircular dark purple spot, having a whitish centre; the claws of the 2 upper ones connivent; the lower one recurved and spreading, with a narrower claw. *Stamens* 6, declined, inserted at the base of the segment of the perianthium; the 3 opposite the inner segments longer. *Filaments* awl-shaped, white, copiously furnished at the middle with papillæ. *Anthers* incumbent, 2-celled, of a brown-purple. *Ovarium* 3-celled, 3-sided, with 3 additional but scarcely perceptible angles. *Style* triquetrous, shorter than the stamens, with minute, elevated, scattered, violet dots. *Stigma* trifid, with oblong, obtuse, recurved, copiously papillose lobes. *Capsule* rounded, turbinate, 3-sided, terminated by a broad, elevated angular disk, 3-celled. *Seeds* many, globose.

That this is the plant of Feuillée no one can possibly doubt after comparing it with the figure and description of that accurate author, from whom alone Linnæus took up the species, as he never saw a specimen of it, and he has marked the plant in the *Species Plantarum*, as one with which he was unacquainted, except from the source above-mentioned. He afterwards, however, confounded with it an analogous species from the West Indies, a drawing of which he had received from Baron Alströmer, and to the latter plant the whole of the description in the *Supplementum* of the Younger Linnæus applies, and not to the Chilian plant of Feuillée, and it is also the *Salsilla* of all subsequent authors. The two plants are most essentially different both in their leaves and flowers, and we have therefore restored to the former its proper, although long-usurped appellation, leaving to the West Indian plant the name of *edulis*, first given to it by Tussac in his “*Flore des Antilles*.”

This very elegant species of *Alstræmeria* was introduced in 1831 from Chili, where it appears to be very common, especially about Conception and Valparaiso, whence we have specimens from Messieurs Caldcleugh, Cuming, and Bridges.

The plant will be found to succeed well in a warm sheltered border. It should be planted in a soil composed of peat and loam, with a proportion of well-rotted manure, and it may be increased both by parting the roots, and by seeds.

Our drawing was taken in May 1833 from a fine plant which blossomed in Mr. Knight's choice collection, King's Road, Chelsea.

The genus was named by Linnæus after his friend and patron Baron Alströmer, a great promoter of Botany, and from whom he had received coloured drawings of some species of it. *D. Don.*



1. Stamen. 2. Pistil. 3. Section of the Ovarium.



LINUM monogynum.

Monogynous Flax.

Linnean Class and Order. PENTANDRIA PENTAGYNIA.

Natural Order. LINEÆ. *Decand. prodr.* l. p. 423.

LINUM. Calyx 5-phyllus: foliolis integris. Petala 5. Stamina 5, basi monadelpha. Styli 5, raro 3. Capsula globosa, acuminata, 10-locularis, 10-valvis: loculis monospermis.

Herbæ v. Suffrutices, foliis integris plerumque sparsis, floribus axillaribus solitariis, aut terminalibus corymbosis v. paniculatis.

L monogynum, perenne, erectum, glabrum; foliis lanceolatis acutis 3-nerviis, floribus corymbosis, foliolis calycinis ovato-lanceolatis acutis carinatis, stylis concretis!

Linum monogynum. *Forst. prodr.* p. 23.

Plant perennial, glabrous, of a glaucous green. *Stems* erect, rigid, furrowed, leafy, about a span high, branched at the top, and slightly woody at the base. *Leaves* lanceolate, acute, spreading or occasionally deflected, attenuated at the base, but scarcely stalked, 3-nerved, flat, entire, marked with numerous whitish dots, about an inch long, and 3 lines broad. *Flowers* large, campanulate, in a corymbiform panicle. *Peduncles* one-flowered, angular, half an inch long, very much thickened at the top. *Calycine leaves* ovate-lanceolate, acute, keeled, connivent, with a white, cartilaginous, entire border, the 3 outer ones rather larger. *Petals* pure white, double the length of the calyx, broadly obovate, entire, even, traversed by many forked nerves, the claws very short and callous, with a membranous border. *Stamens* 5, monadelphous, about as long as the calyx. *Fila-*

ments awl-shaped, white, united at the base into a membranous cup, and having 5 short subulate teeth (sterile stamens) alternating with them. *Anthers* linear, obtuse, cream-coloured, of two parallel connate cells. *Styles* 5, connate, longer than the ovarium. *Stigmas* 5, spreading, filiform, obtuse, minutely papillose. *Ovarium* globose, pointed, somewhat conical, smooth, 10-celled. *Ovules* solitary, elliptical, compressed, emarginate.

A very pretty perennial species, native of New Zealand, and apparently almost hardy, flowering and perfecting its seeds freely in the open border. We have compared the cultivated plant with native specimens in Forster's Herbarium, and we find them to agree in every respect. The styles are united together along their whole length.

The plant should be protected in a pit or frame during winter. A mixture of peat and loam will be found to suit it best, and it may be increased either by slips or by seeds.

Our drawing was taken from a plant which flowered in Mr. Knight's collection, King's Road, Chelsea, in June last.

The generic name *Linum* is the same with the Greek λινον, and both derived from *llin*, a thread, in Celtic. *D. Don.*



1. Calyx. 2. Stamens. 3. Stamens and Pistil.



4 Sep 1964 at 4.00, 4.10

\mathbb{C}^2 上の 2 次元ベクトル空間 V 上の $GL(V)$ の作用 ρ を考える。

GARDOQUIA Hookeri.

Carolina Gardoquia.

Linnean Class and Order. DIDYNAMIA GYMNOSPERMIA.

Natural Order. LABIATÆ. *Juss. gen.* p. 110. Trib. V. MELISSINÆ.

Bentham labiat. p. 365.

GARDOQUIA, *Calyx* tubulosus, 13-nervius, subincurvus, ore æquali vel obliquo, dentibus brevibus rectis subæqualibus vel subbilabiatis. *Corollæ* *tubus* longè exsertus, rectus vel incurvus, intùs nudus; limbus bilabiatus, labium superius erectum subplanum emarginatum, inferius subpatens, lobis planis medio latiore. *Stamina* 4, subdidynama, inferioribus longioribus laxè adscendentia, apice subdistantia, superiora subinde sterilia. *Filamenta* edentula. *Antheræ* biloculares, loculis distinctis parallelis vel subdivergentibus. *Styli* lobi subæquales. *Achenia* sicca, lævia.

Suffrutices fruticesve *ramosissimi foliosi, sæpè procumbentes*. Flores *pulchri, sæpius coccinei*. *Bentham l. c.* p. 397.

G. Hookeri, fruticosa, canescens; foliis obovatis integerrimis planis subaveniis, pedunculis 1—3-floris bibracteolatis, calycis labio superiore 3-dentato: fauce intùs villis clausâ.

Gardoquia Hookeri. *Bentham l. c.* p. 401.

Cunila coccinea. *Hooker exot. fl.* 3. t. 163.

Melissa coccinea. *Spreng. syst.* 2. p. 224.

A small upright, fragrant, branched shrub, about a foot or a foot and a half in height. *Branches* slender, erect, minutely hoary. *Leaves* obovate, pointed, or rarely obtuse, minutely hoary and dotted on both sides, of a glaucous green, coriaceous, attenuated at the base, a fourth of an inch in length. *Footstalks* very short, compressed. *Flowers* axillary, solitary or in threes, seated on a very short, clavate peduncle, which is furnished at the base with 2 lanceolate acute, erect bractes. *Calyx* tubular, nearly glabrous, with 13 ribs, thrice longer than the peduncle, limb bilabiate, lower lip of 2 ovate-oblong connivent teeth, upper one broad, truncate, with 3 slightly prominent recurved teeth; the throat closed with connivent hairs. *Corolla* large, tubular, scarlet, thrice longer than the calyx, copiously hairy externally; faux ventricose; limb bilabiate, with equal extended lips, upper one concave 2-lobed,

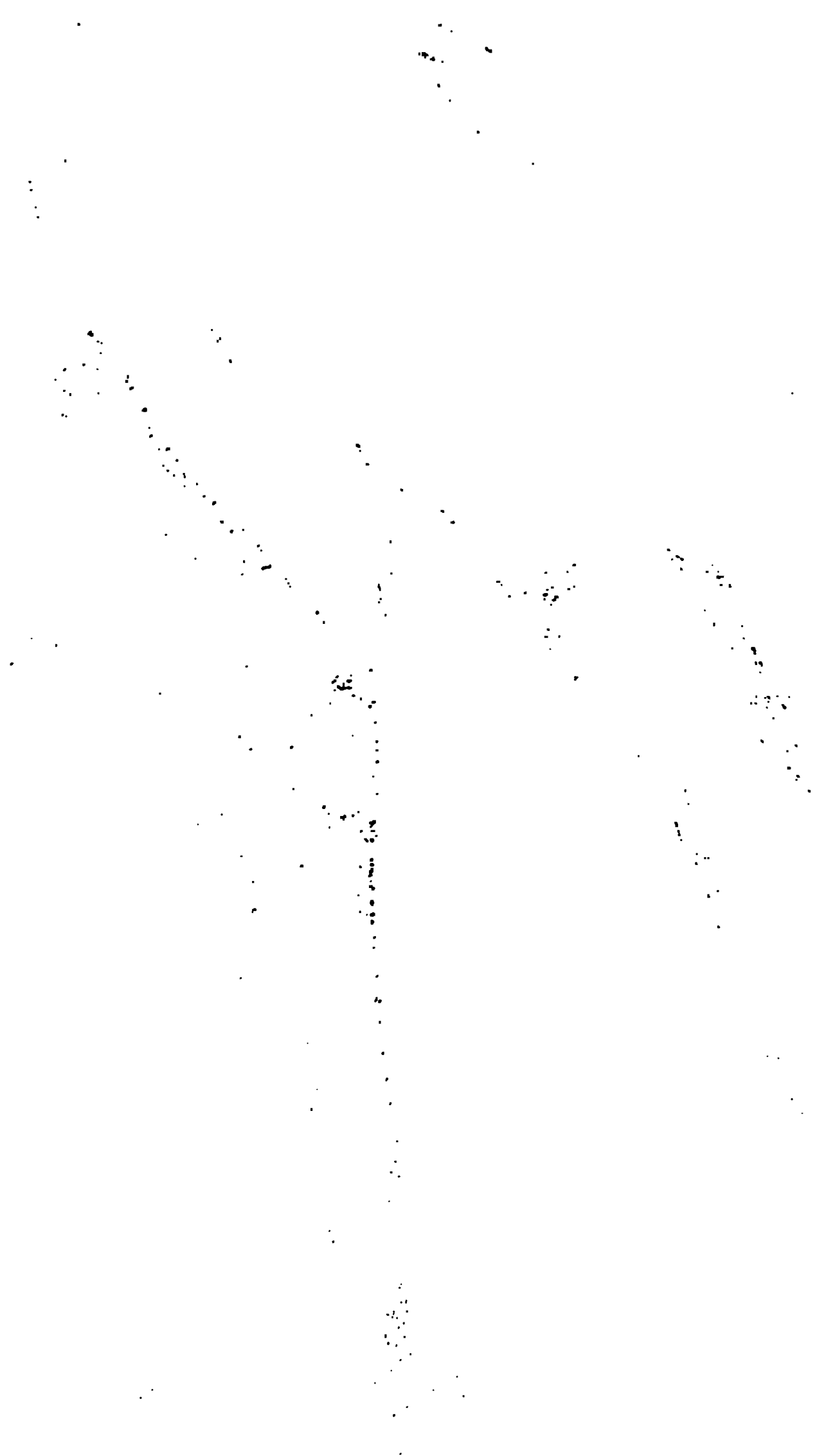
lower one 3-lobed, the lobes short, rounded, even. *Stamens* 4, didynamous ; anterior pair longest. *Filaments* compressed, white, glabrous. *Anthers* bilocular, the cells purple, hairy, attached along the margin of the broad, heart-shaped, white fleshy connectivum. *Style* filiform, white, glabrous, longer than the corolla. *Stigmas* 2, awl-shaped, acute, nearly equal, recurved, the posterior one rather shorter. *Ovarium* 4-lobed.

Gathered on the mountains of South Carolina by Mr. Alexander Gordon, a collector sent out by our friend Mr. Charlwood, to whose exertions we are already indebted for a number of equally rare and showy plants from North America, which had either never been before introduced, or had become lost to our gardens. The subject before us is a highly ornamental little shrub, and is well deserving the attention of the cultivator, both on account of the delicacy of its habit, and its large showy blossoms, which rival those of the *Salvia fulgens*. The plant thrives best in a mixture of sandy peat and loam, and is increased with facility by cuttings. It will require the protection of a frame in winter, and the pots should be well drained, and the plants plentifully supplied with water while in a growing state. The plant continues in blossom from June to October. Our drawing was taken from specimens communicated by Mr. Charlwood in August last.

It is stated in Dr. Hooker's Exotic Flora to be from Florida, but it is more than probable that this is a mistake, as it is not likely that a plant should be at the same time a native of the mountains of South Carolina, and of the low, swampy regions of the Floridas.

Nuttall took it for a *Cunila*, and called it *C. coccinea*, but this appears to have been at hazard, for it is not likely that so accurate an investigator would have referred it to a genus with which it has so few characters in common, had he seen the plant in a living state, or been furnished with perfect specimens of it.—Mr. Bentham, in his elaborate treatise on the *Labiatae*, has rightly included it in *Gardoquia*.

The genus was dedicated by Ruiz and Pavon to Don Diego Gardoqui, Minister of Finance under Charles IV. of Spain, who greatly promoted the publication of the *Flora Peruviana*. *D. Don*.





BRUGMANSIA sanguinea.

Dark-red Brugmansia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANEÆ. *Brown prodr.* 1. p. 443.

BRUGMANSIA. *Calyx* tubulosus, ventricosus, 5-angulatus, persistens, apice coarctato 2-3-lobo. *Corolla* infundibuliformis, 5-plicata, 5-loba: lobis cuspidatis. *Stamina* 5, inclusa, coarctata. *Antheræ* conglutinatæ. *Stigma* crassum, bilobum, margine revolutum. *Capsula* 2-locularis, lævis, polysperma. *Semina* reniformia.

Arbores (Peruviani) foliis petiolatis indivisis, floribus alaribus pedunculatis maximis albis v. sanguineis, fructibus ovalibus pendulis aureis. Genus omninò, ut videtur, naturale inter Daturam et Solandram locum tenens. *D. Don. MSS.*

1. *B. sanguinea*, foliis sinuato-lobatis subtomentosis.

Brugmansia bicolor. *Persoon syn.* 1. p. 216. *Ræm. et Schult. syst.* 4. p. 307.

Datura sanguinea. *Ruiz et Pavon fl. peruv. et chil.* 2. p. 15. *Kunth in Humb. et Bonpl. nov. gen. et sp. pl.* 3. p. 6.

Stem arboreous, rising to the height of from 3 to 12 feet, round, divided at the top, and clothed with an ash-coloured bark. *Branches* short and leafy, thickly clothed with white-spreading hairs. *Leaves* alternate, often geminate, ovate-oblong, obtuse, waved and sinuated, with short blunt lobes, copiously clothed on both sides with soft white hairs, above of a dark green, paler beneath, reticulated and rather wrinkled with prominent veins, and furnished with a stout rounded midrib, with lateral branches from 2 to 9 inches long, and from 1 to 5 broad, the base rounded and often unequal; the uppermost entire, but slightly waved. *Petioles* stout, from an inch to 3 inches long, nearly cylindrical, copiously hairy, slightly flattened above. *Flowers* solitary, pendulous, issuing from the forks of the branches. *Peduncles* an inch long, and as thick as a writing quill, cylindrical, copiously clothed with white hairs. *Calyx* large, ventricose, 5-angled, 5-ribbed, with prominent veins, copiously pubescent, rather contracted at the top, about 3 inches long, the limb cloven with concave lobes. *Corolla* funnel-shaped, 7 inches long, pubescent, with 15 straight prominent ribs; tube thick and fleshy, with 5 blunt angles, orange yellow, green towards the base; faux inflated, wrinkled and pitted exteriorly; limb 5-lobed, of a deep orange-scarlet, with the lobes cuspidate and spreading, each being furnished with 3 ribs, the two lateral of

which disappear before reaching the summit. *Stamens* 5, closely associated round the style. *Filaments* cylindrical, glabrous, pale green, their bases broad, flat, attached to the tube of the corolla, and clothed with shaggy hairs. *Anthers* erect, half an inch long, attached by their base, cream-coloured, obtuse, with parallel connate cells. *Ovarium* bilocular, conical, 5-sided, white, surrounded at the base by a 5-lobed fleshy disk, the parietes thick and fleshy. *Placentæ* 2, oblong, fleshy, attached to the partition. *Style* filiform, glabrous, 4 inches long. *Stigma* projecting, with 2 short, thick, rounded lobes, revolute at the edges.

It is peculiarly gratifying to us to have to record the first introduction to our collections of this truly splendid plant, which was raised last year at Hayes Place, Kent, the seat of Miss Traill, from seeds collected at Guayaquil, in the state of Equador, by Mr. Crawley, who sent them to his aunt Lady Gibbs, by whom they were presented to Miss Traill. One of the plants survived the winter in the open border, and this also happened to be the first to show flower, which it did in October last. The rest of the plants began to blossom soon after, and all apparently varying in the degree of intensity in colour. In cultivation the plant rarely exceeds four or five feet in height, and evidently possesses a hardier constitution than *arborea*. It delights in a friable rich soil, and is easily increased by cuttings. In a sheltered border with a southern aspect, we have no doubt of its flowering quite as well as if retained in the conservatory. Both species are natives of Peru, but the *sanguinea* is found at a much greater elevation than the other. The plant is also found in New Granada, and it has been introduced into Chili, as we have seen specimens collected at Conception by Captain Beechey and Mr. Cuming. In Peru it is called *Floripondio encarnado* and *Campanillas encarnadas*, and from the bruised leaves an ointment is prepared, which is said to possess superior healing properties, and from the fruit a highly narcotic intoxicating liquor is obtained.

Our drawing was taken from flowering specimens obligingly communicated by Miss Traill, in the beginning of November.

The genus was named by Persoon after S. J. Brugmans, Professor of Natural History in the University of Leyden. *D. Don.*



FUNKIA lancifolia.

Lance-leaved Funkia.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. HEMEROCALLIDÆ. *Brown prodr.* 1. p. 295.

FUNKIA. *Perianthium* infundibuliforme, deciduum. *Stamina* 6, medio basive tubi inserta, declinata. *Antheræ* incumbentes: *loculis* parallelis, connatis. *Stylus* declinatus. *Stigma* clavatum, indivisum, trigonum. *Capsula* turbinato-oblonga, 3-locularis, 3-valvis, polysperma: *valvis* navicularibus, mucronatis, medio septiferis. *Placentæ* 2, angustatæ, dentatæ. *Semina* duplici ordine disposita, elliptico-oblonga, compressa, erecta, apice alata, umbilico obliquo, depresso, basilari: *testâ* laxâ, atrofusâ, membranaceâ, fragilis: *albumen* copiosum, cartilagineum, hyalinum. *Embryones* 6-10! teretes, breves, inæquales, (unico forsan adolescenti,) ad umbilicum sitos, albuminis unicâ cavitate inclusos, et a basi communi oriundos. (*Br.*)

Herbæ (japonicæ) *perennes*, *radice fibrosâ*. *Caulis simplex*. *Folia petiolata, dilatata, nervosa*. *Flores racemosi, cernui, cærulei v. albi*.

In seminibus *F. cæruleæ* embryones 3 sæpiùs inveni.—*D. Don MSS.*

F. lancifolia, foliis lanceolatis acuminatis 7-nerviis basi attenuatis, racemo paucifloro, perianthii limbo turbinato tubo longiore: laciniis oblongis patentibus.

Funkia lancifolia. *Spreng. syst.* 2. p. 41.

Hemerocallis lancifolia. *Thunb. in linn. trans.* 2. p. 335.

Gibboosi altera, folio angustiori, flore autumnali. *Kämpf. amæn.* p. 863.

Root perennial, fibrous, white. *Stems* erect, cylindrical, simple, slender, smooth, green, from a span to a foot high. *Leaves* lanceolate, pointed, 7-nerved, 4 or 5 inches long, scarcely an inch broad, smooth on both sides, grass green above, paler beneath, attenuated at the base, the margin entire and cartilaginous; radical ones on short channelled, winged footstalks; those of the stem sessile. *Flowers* about 4 or 5, drooping, in a loose, terminal, unilateral raceme. *Peduncles* very short, cylindrical, green. *Bractes* solitary, leafy, ovate-lanceolate, acuminate, smooth,

green, 5-nerved. *Perianthium* pale purple, funnel-shaped, tube half-an-inch long, cylindrical, narrow, paler, the limb turbinate campanulate, 6-cleft, gradually attenuated into the tube, which it thrice surpasses in length, the lobes are oblong, or oblong-lanceolate, somewhat acute, and marked with 4 or 5 deeper coloured nerves. *Stamens* 6, declinate, nearly equal, shorter than the perianthium, attached to the base of the tube. *Filaments* slender, glabrous, white. *Anthers* short, incumbent, yellow, composed of 2 parallel connate cells. *Ovarium* oblong, 3-sided, green. *Style* filiform, white, declinate, longer than the stamens, rather thicker at the apex. *Stigma* blunt, undivided.

An interesting addition to our hardy flowers from Japan, whence it was introduced last year by Mr. Knight of the Exotic Nursery, King's Road, Chelsea, where our drawing was taken in August last. It is well distinguished from *cærulea* by the form of its leaves and flowers. Thunberg seems to have confounded both these, as well as *alba*, in the *Flora Japonica*, and in the second volume of the Linnean Transactions, where he first separates *lancifolia*, he continues to confound them with the *alba*. The three are essentially different. The *alba* has the stamina inserted into the middle of the tube of the perianthium. In a number of mature seeds of *cærulea*, which I examined, I found but 3 embryos. They were united together at the base, the central one being considerably larger than the rest, and apparently the only one likely to vegetate.

The genus was named by Sprengel after Henry Christian Funck, an apothecary at Gefrees, in the principality of Bayreuth, in the Prussian States, the discoverer of several new mosses, and who has published fasciculi of dried specimens of the cryptogamous plants of Germany. *D. Don.*



1. Pistil.



Phaseolus vulgaris L. var. *stuebelii* (L.) 1834

VICIA polysperma.

Many-seeded Vetch.

Linnean Class and Order. DIADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. *Juss. gen. p.* 345.

VICIA. Calyx 5-dentatus, dentibus 2 superioribus brevioribus. Corolla papilionacea. Stamina diadelphea. Stylus filiformis. Stigma sub apice undique barbatum. Legumen oblongum, 1-loculare, polyspermum. Semina, hilo ovali v. lineari, laterali, raro terminali.

Herbæ (hemisph. boreal.) plerumque scandentes. Folia pinnata, cirrhosa. Stipulæ sæpè sagittatæ. Pedunculi axillares elongati v. breves uniflori.

V. polysperma, foliolis multijugis elliptico-oblongis, mucronatis, stipulis lunatis argutè dentatis, pedunculis multifloris angulatis, stigmatè penicillato, leguminibus lineari-lanceolatis compressis glabris, seminibus globosis.

Vicia polysperma. *Ten. fl. neap. prodr. append. 5. p.* 22. *fl. nap. t.* 175. *syll. pl. fl. neap. p.* 361.

The whole herb glabrous, and of a grass green. *Root* perennial. *Stems* many, scandent, rising to the height of 3 or 6 feet, 4-angular, furrowed, the joints occasionally stained with dark red. *Leaflets* of about 8 pair, alternate, elliptical-oblong, with a short, abrupt, bristly point. *Tendrils* composed of 5 long, filiform, revolute, hooked and pointed segments. *Stipules* lunate, with sharp spinous teeth. *Peduncles* angular, glabrous, about as long as the leaf. *Racemes* loose, of about twelve flowers. *Pedicels* scattered. *Calyx* tubular, smooth, green, sometimes stained with purple, the 3 lower teeth linear-lanceolate, acuminate, straight, slightly ciliated; 2 upper ones ovate, mucronate, very short, connivent, glabrous. *Vexillum* pale purple, marked with deeper coloured veins, obcordate-oblong, with the sides folded back. *Keel* and *Wings* nearly white, the former shorter, ventricose, blunt, cloven, and marked with dark blue at the top, traversed by conspicuous veins; the

latter half-cordate, rounded, entire at the top, the basal lobe folded and saccate. *Filaments* white, glabrous, the tenth separate. *Anthers* oblong, yellow, equal. *Ovarium* linear, glabrous. *Style* compressed contrary to the ovarium, white. *Stigma* brush-like, bearded all round with white spreading hairs. *Legumes* linear-lanceolate, pointed, many-seeded, compressed, glabrous, attenuated at the base, about two inches long. *Seeds* from 14 to 20, globose.

Our drawing of this very pretty Vetch was taken from Mrs. Marryat's collection at Wimbledon in June last. The plant had been raised from seeds received by Mrs. Palliser from Professor Tenore, who discovered it in a wood on the road to Bagnuoli in the kingdom of Naples. It appears to come very near to our native *V. sylvatica*, and indeed its characters are hardly marked enough to separate it; but even should it prove to be only a variety of that species, its beauty will nevertheless entitle it to a place in the flower border. It should be planted in a gravelly loam, and is easily multiplied by seeds, which it perfects abundantly. We would recommend the seeds to be sown where the plant is intended to remain, as few of the *Leguminosæ* bear to be disturbed when once planted.

The word *Vicia*, employed by Pliny and other Roman authors to denote a species of this genus, is of doubtful origin, and occurs in most of the languages of Europe with little variation. *D. Don.*



1. Keel. 2. Wing. 3. Stamens. 4. Pistil. 5. Pod.



LILIUM tenuifolium.

Fine-leaved Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. LILIACEÆ. *Brown prodr.* 1. p. 295, in notd.

LILIUM.—Suprà fol. 185.

L. tenuifolium, perianthio revolutò: foliolis lævibus basi sulco bivalvi munitis, pistillo staminibus duplò breviorè, capsulis turbinatis rotundis, foliis lineari-angustissimis.

Lilium tenuifolium. *Fisch. MSS. Schrad. pl. rar. hort. gætt. fasc. 1. Ræm. et Schult. syst.* 7. p. 409. *Hooker in bot. mag. t.* 3140.

L. radice tunicata, foliis sparsis, floribus reflexis, corollis revolutis. *Gmel. sib.* 1. p. 42. n. 9.

L. reflexum, montanum, humile, angustifolium, aurantium. *Amm. ruth. n.* 138.

Bulbs about the size of a walnut, rather coated than scaly. *Stem* erect, from a span to a foot high, slightly angular, scarcely thicker than a crowquill, copiously besprinkled, as well as the rest of the plant, with minute crystalline dots, which give it a glaucous hue. *Leaves* rather crowded, especially towards the top of the stem, disposed in a spiral manner, occasionally verticillate, very narrow, linear, bluntish, dotted, of a glaucous green, somewhat twisted, glabrous, with a narrow silvery edge, marked above with a shallow furrow, the keel blunt, bearing at the base a tuft of long, soft, jointed, spirally convolute, and finally pendulous hairs; the primordial ones lanceolate, acute, nerved, shining, attenuated towards the base, and somewhat stalked. *Flowers* mostly solitary in native specimens, but often 3 or 5 in cultivated plants, about half the size of those of *L. chalcedonicum*, and of the same rich minium red. *Peduncles* wavy, spreading, filiform, glabrous, an inch, or an inch and a half long, slightly thickened at the apex. *Perianthium* 6-petaloid, the

leaves sessile, equal, oblong-lanceolate, scarcely apiculate, revolute, glossy, furnished at the base with a rather wide furrow, the edges of which are thin, connivent, valvate, and papillose. *Stamens* 6, equal. *Filaments* awlshaped, glabrous, of a pale red, connivent at the base, spreading at the top, shorter than the leaves of the perianthium. *Anthers* incumbent, about 2 lines long, of a brown purple. *Pistil* shorter than the stamens. *Ovarium* triquetrous. *Style* triquetrous, about the length of the ovary. *Stigma* capitate, 6-lobed, the lobes connivent and minutely papillose. *Capsule* scarcely an inch long, rounded-oval or turbinate, swollen, membranous, marked by 6 faint lines, 3-celled, 3-valved, the angles round, even, not keeled. *Seeds* brown, flat, dotted, with a narrow, membranous border.

In delicacy of foliage, brilliancy of flowers, and gracefulness of habit, the present is not surpassed by any others of this highly ornamental genus. It is a native of the vast steppes of Siberia, where it appears to be abundant, but it is never found to extend beyond the 55 degree of north latitude. The bulbs are eaten by the wandering Tartars.

It had been confounded by Pallas, and most other botanists, with *L. pomponium*, from which it is easily distinguished by its smooth sepals, and by the more rounded angles of its capsule. Dr. Fischer first determined it to be a distinct species, and gave it the very apt name which it now bears. In *L. chalcedonicum* the sepals are warted, and the angles of the capsules keeled at the top. The whole plant is likewise much larger, the leaves broader, and the flowers nearly double the size. Our drawing was taken from specimens which flowered in the Botanic Garden Chelsea, where the plant was unusually luxuriant. *D. Doi*



1. Primary leaf.

2. Portion of a leaf magnified.



... ..

DABŒCIA polifolia; var. alba.

White-flowered Irish Heath.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. ERICACEÆ. subtrib. 2. ANDROMEDEÆ. *Don in edinb. phil. journ. July 1834, p. 152.*

DABŒCIA. *Calyx* 4-partitus. *Corolla* ovalis, ventricosa, limbo 4-dentato. *Stamina* 8, inclusa. *Filamenta* dilatata, glabra. *Antheræ* lineares, basi sagittatæ: *loculis* parallelis, apice solutis, longitudinaliter dehiscentibus. *Stigma* simplex, truncatum. *Capsula* 4-locularis, septicido-dehiscens, submembranacea. *Placenta* prismatica. *Semina* subrotunda, ventricosa, gilva, lævia, chalazâ parvâ notata.

Fruticulus (Hiberniæ et Pyrenæor.) *sempervirens*. *Folia elliptica, plana! subtùs niveo-tomentosa*. *Flores terminales, racemosi, purpurei*. *Don in l. c. p. 160.*

D. polifolia. *Don in l. c. p. 160.* *G. Don, gen. syst. gard. & bot. 3. p. 833.*

Menziesia polifolia. *Juss. in ann. mus. 1. p. 55.* *Persoon syn. 1. p. 419.*

Smith engl. fl. 2. p. 223.

M. Dabeoci. *Smith comp. fl. britt. p. 70.*

Andromeda Dabœcia. *Linn. syst. veg. ed. 13. p. 338.*

Erica Dabœcii. *Linn. sp. pl. p. 509.* *Huds. angl. p. 166.* *Thunb. diss. n. 1.*

Willd. sp. pl. 2. p. 383. *Smith engl. bot. t. 35. fl. britt. 1. p. 420.*

Vaccinium cantabricum. *Huds. angl. ed. 1. p. 143.*

E. cantabrica, flore maximo, foliis myrti pilosis subtùs incanis. *Tournef. inst. p. 603.*

E. hibernica, foliis myrti pilosis subtùs incanis. *Petiv. gaz. p. 42. t. 27. f. 4.*

Erica s. Dabœcia hibernis. *Raii dendr. p. 98.*

β. alba, tota pallidior; floribus albis.

A dwarf, erect, bushy, evergreen shrub, rarely exceeding two feet in height. *Branches* pale brown, leafy, copiously clothed with glandular spreading hairs. *Leaves* stalked, ovate-lanceolate, mucronulate, attenuated at the base, revolute at the margin, white and downy beneath, dark green and veiny above, and sparingly beset with short bristly hairs, from 3 to 6 lines long, and from 2 to 3 broad. *Footstalks* short, pale green, channelled above, and fringed

at the margin. *Racemes* terminal, solitary, many-flowered, from 3 to 9 inches long. *Flowers* drooping. *Peduncles* filiform, straight, copiously clothed with glandular viscid hairs. *Bractes* lanceolate, pointed, shorter than the peduncles. *Calyx* deeply 4-partite; segments lanceolate, acuminate, fringed with glandular hairs. *Corolla* oval, ventricose, slightly pubescent, with 4 short lobes, most commonly lilac, but occasionally varying to dark red, or pure white, as in the variety now before us. *Stamens* 8, inclosed. *Filaments* flat, white, glabrous, broader and imbricate at the base. *Anthers* longer than the filaments, of a dark brown, the cells parallel, free at the top, opening lengthways, produced at the base into a short mucronulate spur. *Style* slender, longer than the ovarium. *Stigma* slightly capitate. *Capsule* ovate, hairy and glandular, 3 lines long, the valves rather membranous.

The present very beautiful variety was gathered in the county of Mayo, by our valued friend Mr. J. T. Mackay, in 1832. The flowers are rather larger than in var. *a*, and they are produced in equal abundance. The plant requires a peat soil, and is easily propagated by layers and by cuttings, so that it will soon become as common in our collections as it deserves to be.

The variety *a* grows wild at Old Head, on Croagh-Patrick, and around Castle Bourke, in the county of Mayo. On Croagh-Patrick Mr. Lambert found it extending almost to the top of the mountain, which Mr. Kirwan and he ascertained to be 2666 feet above the level of the sea. It has also been found on the Pyrenees, but the flowers in the continental plant are of a deeper colour.

“Ray tells us in his History of Plants, that it is called St. Dabeoc’s Heath (from whence the generic name), and that the Irish girls gird themselves with its long trailing branches as a protection to their chastity—With what success he unluckily has omitted to inform us.” *D. Don.*

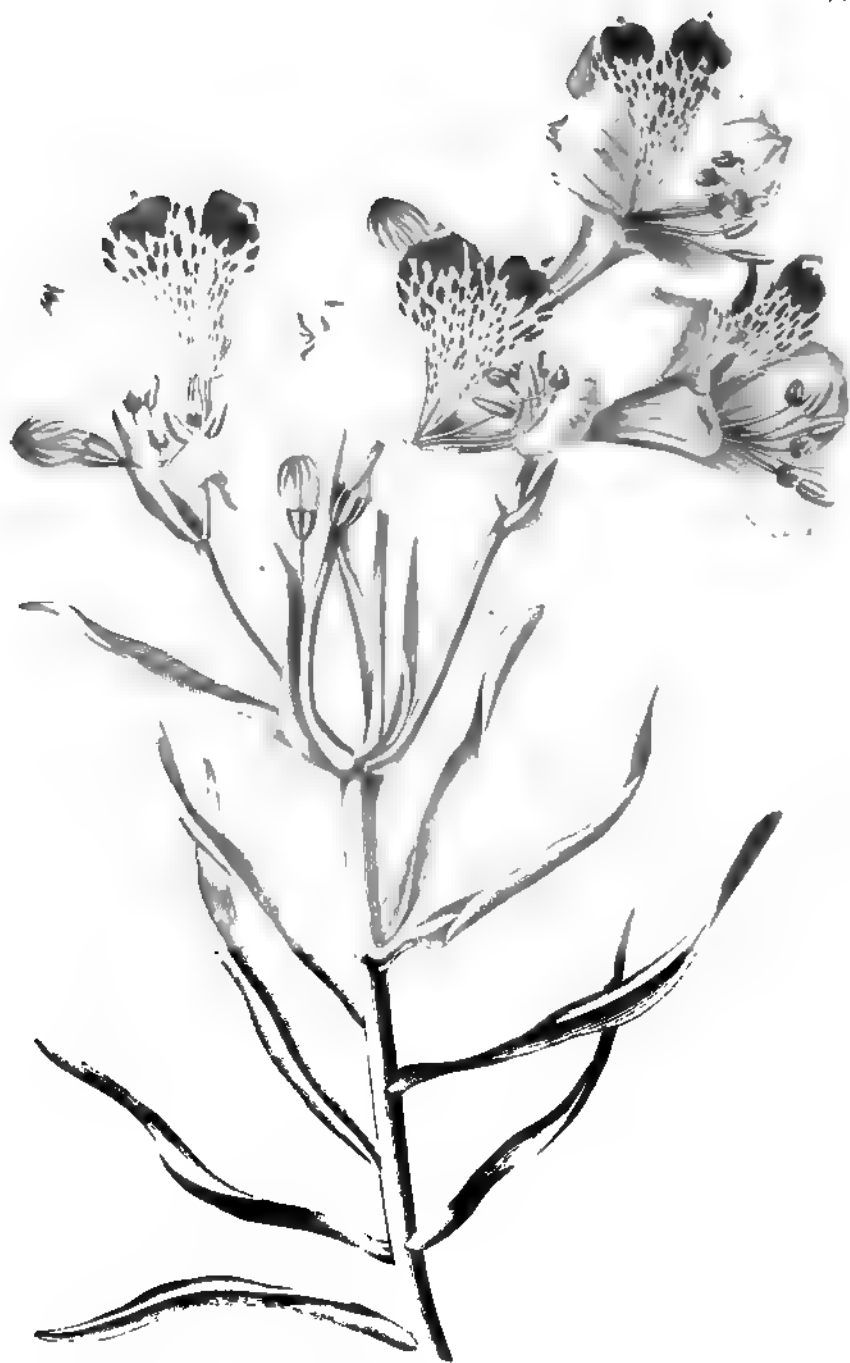


1. Stamens and Pistil.

2. Stamens separate.

3. Pistil.

4. Sprig of the purple variety.



F. W. Smith del. et sculp. Bot. Beecheyana. Bot. 11.

ALSTRŒMÈRIA Flós Martini.

St. Martin's Flower of Chile.

Linnean Class and Order. HEXANDRIA MONOGYNIA.
Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.
ALSTRŒMERIA. *Suprà fol.* 269.

A. Flos Martini, caule erecto, foliis linearibus tortuosis glabris, pedunculis subbifloris umbellatis, perianthii foliolis 3 exterioribus cuneato-obcordatis serratis.

Alstrœmeria Flos Martini. *Ker in bot. reg. t.* 731.


A. pulchella. *Sims in bot. mag. t.* 2421. non *Linn.*

A. tricolor. *Hooker exot. fl. l. t.* 65.

Stem erect, round, glabrous, from a span to a foot high. *Leaves* scattered, linear, rather acute, glabrous, slightly rough at the edge, pruinously glaucous on both sides, as well as the stem, the upper ones broader and almost lanceolate. *Flowers* varying from 2 to 8, umbellate. *Peduncles* compressed, forked, glabrous, furnished at the top with 6 sharp angles, the divisions occasionally dichotomous and two-flowered. *Perianthium* campanulate, bilabiate; 3 outer leaves cuneately obcordate, with a fleshy, green, concave point, purple outside, nerved and veiny, with narrow folded claws, upper surface and edges of a yellowish white, slightly stained with purple, the margins serrated near the top; lower one of the inner series shorter, cuneate, blunt, serrated, nearly white; 2 upper ones oblong-spathulate, narrower and longer, scarcely pointed, and almost entire, below of a pale pink, upper half with a bright yellow ground, stained with irregular dark red spots, and the apex almost entirely of the latter colour; the claws longer and tubular. *Stamens* 6,

unequal, declinate. *Filaments* awl-shaped, connivent at the base, pale pink. *Anthers* oblong, reddish-brown, with parallel connate cells. *Style* 3-sided, white. *Stigma* with 3 narrow, blunt, keeled, pale purple lobes. *Capsule* rounded-turbinate, with 6 elevated, sharp, almost winged angles.

Our drawing of this very pretty *Alstræmeria* was taken at Mrs. Marryat's collection in the beginning of June last, from a plant which blossomed in the open border, in which situation it is found to flourish equally well with those retained in the greenhouse, and the flowers are usually of a brighter hue. A soil composed of equal parts of loam, sand, and vegetable mould or peat, will be found best adapted to it, and it may be increased, either by dividing the roots, or by seeds, which it affords freely. It comes near to *A. pelegrina*, but its narrower serrated sepals distinguish it from that species. By Ruiz and Pavon it appears to be included among the varieties of their *A. hæmantha*, and except the colour, broader sepals, and glabrous leaves, there is little else to separate them. In Chile it is called Flor de San Martin. The generic name will be found explained at fol. 269. *D. Don.*





BÉLLIUM crassifolium.*Thick-leaved Lesser Daisy.*

Linnean Class and Order. SYNGENESIA POLYGAMIA SUPERFLUA.
Natural Order. COMPOSITÆ. *Adans. fam.* 2. p. 103.
Fam. VII. ASTEREÆ Cass. Trib. BELLIDEÆ.
BELLIUM. Suprà fol. 175.

B. crassifolium, caulescens ; foliis spathulatis integerrimis, flosculis disci 5-dentatis, styli ramis cono papilloso terminatis, pappi paleis truncatis erosis.
Bellium crassifolium. *Moris in litt. Spreng. syst.* 4. p. 303.

Plant perennial, caulescent, somewhat suffruticose, sparingly clothed with adpressed pubescence. *Stems* decumbent, dull purple, cylindrical, about 3 inches long. *Leaves* thick and fleshy, spathulate, blunt, on narrow linear compressed footstalks, about an inch long. *Peduncles* erect, filiform, 5 inches long, dull purple, pubescent. *Involucrum* hemisphærical, of 16 linear-oblong, obtuse, equal pubescent, green leaves, gibbous at the base, and membranous at the edges. *Rachis* pyramidal, naked, minutely tuberculate. *Rays* about 18, female, oblong, somewhat pointed or notched, more rarely 3-toothed, spreading, milk white above, purple beneath. *Florets of the disk* tubular, 5-toothed and pentandrous, minutely papillose, yellow, pale green below. *Filaments* slender, glabrous, jointed at the apex. *Anthers* united into a tube, blunt and awnless at the base, terminated by a lanceolate, acute appendage. *Style*, the branches of in the rays linear, blunt, compressed, glabrous ; of the disk thicker, and terminated by a conical, compressed, papillose appendage. *Achenia* cuneate, compressed, pubescent, marginate. *Pappus* of 6 or 8 broad, scariose, truncate paleæ, torn at the apex, alternating with an equal number of long scabrous bristles.

This pretty little Daisy is a native of Sardinia, where it was discovered by Signor Moris, Director of the Royal Botanic Garden at Turin, who gave it the very expressive name which it bears. It was introduced to our collections in 1832. The plant is well suited to ornament rockwork, being quite hardy, and fond of a dry situation. It is easily increased by cuttings and seeds.

Our drawing was taken at the Botanic Garden, Chelsea, in June last.

For the explanation of the generic name see fol. 175.
D. Don.



1. Floret of the ray.

2. Floret of the disk.



NUTTALLIA PAPÀVER.

Poppy-like Nuttallia.

Linnean Class and Order. MONADELPHIA POLYANDRIA.

Natural Order. MALVACEÆ. *Juss. gen. p.* 271.

NUTTALLIA. *Calyx* basi nudus v. 3-bracteolatus. *Capsulæ* plurimæ, 1-spermæ, indehiscentes, in orbem dispositæ.

Herbæ (Amer. Boreal.) foliis *petiolatis pedatis*, floribus *solitariis longè pedunculatis lilacinis*.

N. Papaver, calycibus tribracteatis undique setoso-pilosis.

Nuttallia Papaver. *Graham in bot. mag. t.* 3287.

Root biennial, fusiform, white. *Stem* erect, branched, from a foot to 2 feet high. *Branches* filiform, sparingly furnished with adpressed bristly hairs. *Leaves*, the radical ones on footstalks of from 4 to 5 inches in length; 5-lobed, with cuneate-oblong, blunt, lobed, sometimes pinnatifid segments, furnished with a few scattered, adpressed, bristly hairs; those of the stem on shorter stalks, more deeply divided into 3 or 5 narrow, linear, acute, mostly entire segments. *Stipules* ovate, acute, fringed, leafy. *Flowers* solitary. *Peduncles* straight, filiform, from 3 to 6 inches long, clothed with adpressed bristly hairs. *Calyx* 5-cleft, copiously bristly, with ovate acuminate lobes, and furnished at the base with 3 linear, acute, spreading, bristly bractes of about 3 lines in length. *Petals* 5, broadly wedge-shaped, an inch long, somewhat connivent, the upper edge truncate, torn and crenated, of a rich lake, the claws short, white, and fringed at the border. *Stamens* very numerous. *Filaments* united into a column. *Anthers* yellow, reniform, unilocular, composed of 2 cup-shaped valves. *Stigmas* about 12, long, filiform, pale purple, spreading, bearded along their upper

surface. *Ovaria* about 12, 1-seeded, arranged closely in a circle, glabrous, notched exteriorly.

An exceedingly showy plant, and apparently quite hardy, thriving well in a soil composed of equal parts of peat and loam, and increased by seeds, which it, however, affords but sparingly. It does not seem to be more than biennial. It was discovered by Mr. Thomas Drummond near Covington in the state of Louisiana, and was introduced to our collection by seeds transmitted by that indefatigable collector in the spring of 1833.

We had the pleasure of seeing this plant, and that for the first time, in great beauty in the garden of our worthy friend Mr. Neill, at Canonmills, near Edinburgh, in the autumn of 1833.

Our drawing was taken from plants which flowered in Mr. Knight's collection, King's Road, Chelsea, in August last, and which had been received, we believe, from Mr. Neill.

The genus was named by Dr. William Barton, after its discoverer, Mr. Thomas Nuttall, who had previously denominated the plant *Callirhoe digitata*, a species which often occurs in gardens under a double name, and our learned friend Dr. Hooker, has been led to republish it as a second species. With regard to the specific distinction of the present species, there can be no question, but we could have wished that the name of so meritorious a Botanist, as Mr. Nuttall, had been applied to a less doubtful genus, for it will be seen that the presence of bractes at the base of the calyx, in this species, completely removes the limit between it and *Malva*, of which it cannot be regarded but as a section.
D. Don.



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GÍLIA achilleæfolia.

Milfoil-leaved Gilia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. POLEMONIACEÆ. *D. Don in edinb. phil. journ.* 1822, p. 56.

GILIA. Suprà fol. 218.

G. achilleæfolia, foliis pinnato-partitis: segmentis lineari-angustissimis planis, floribus aggregatis pedunculatis, corollæ tubo calyce longiore: lobis obtusis, antheris cordato-oblongis mucronulatis.

Gilia achilleæfolia. *Bentham in bot. reg. fol.* 1622, *ad calcem.* *Lindl. ibid.* t. 1682.

Root fibrous, annual. *Stem* from 3 to 6 inches high, round, and like the rest of the plant furnished with short glandular hairs. *Leaves* alternate, bright green, pinnately parted, the segments narrow, linear, pointed, compressed. *Peduncles* varying in length, filiform, bearing from 3 to 5 flowers, placed on very short, copiously glandular pedicels. *Calyx* tubular, copiously glandular, with 5 ovate-lanceolate, acuminate, erect teeth, the sinuses scarious and purple. *Corolla* about twice the length of the calyx, funnel-shaped, of a nearly uniform deep blue colour, with broad, rounded, blunt, entire lobes, the throat widened, campanulate. *Stamens* 5, blue, inserted just below the sinuses, the free portion of the filaments awl-shaped. *Anthers* oblong-cordate, mucronulate. *Ovarium* bluntly 3-sided, 3-celled, the ovules many in each cell, angular. *Style* filiform, slender. *Stigmas* 3, semi-cylindrical, blunt, recurved, copiously papillose along their inner surface.

Another showy *Gilia* gathered by Mr. Douglas in California, and introduced from seeds sent by him to the Horticultural Society in 1833. It is akin to *G. capitata*, but the

flowers are less numerous, about three or four times the size, and of a deeper colour. It is a hardy annual, growing in almost any kind of soil, and perfecting its seeds freely in the open border.

Our drawing was taken from a specimen communicated by Messrs. Allen and Rogers, in July last, from their nursery at Battersea, whence we also received the white variety of *Dabæcia polifolia* given in our last number, a circumstance we omitted to notice in our account of it.

The generic name is explained at fol. 218. *D. Don.*



1. Corolla laid open, shewing the insertion of the Stamens.

2. Pistil.



GLADIOLUS natalensis.

Natal Corn-Flag.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* l. p. 302.

GLADIOLUS. *Suprà fol.* 140.

G. natalensis, perianthii laciniis ellipticis abruptè mucronatis; 3 superioribus maximis in galeam conniventibus: fauce ventricosâ 6-sulcatâ, spathâ interiore bicuspidatâ tubo longiore.

Gladiolus natalensis. *Reinw. MSS.*

G. psittacinus. *Hooker in bot. mag. t.* 3032. *Lindl. in bot. reg. t.* 1442.

Stems straight, cylindrical, glaucous green, 3 feet or more in height, and about the thickness of one's finger. *Leaves* rather broad, ensiform, acuminate, erect, of a grass green, dark purple at the base, about two or three feet long, with four or five prominent pale ribs, and a white cartilaginous border. *Flowers* the largest of the genus, of a deep orange scarlet, mottled with yellow, about four inches long, disposed in a terminal spike. *Spathes* two, convolute, broadly lanceolate, pointed, pale green, striated, considerably longer than the tube, the inner one shorter, and cloven at the top. *Tube of the perianthium* of a pale green, angular, stained with purple, ventricose and furrowed above, with six broad elevated rounded ridges. *Faux* about the length of the tube. *Segments* three upper ones broadly elliptical, abruptly bristle-pointed, connivent in the form of a helmet, lower one of the same shape and colour, but smaller; inner pair four or five times smaller, paler, with a longer point. *Filaments* three, triquetrous, glabrous, pale yellow, curved. *Anthers* linear-

oblong, incumbent, yellow, emarginate, sagittate at the base. *Ovarium* turbinate, nearly round, with six shallow furrows. *Style* filiform, glabrous, furrowed. *Stigma* of three laterally compressed, recurved, blunt, papillose segments.

A native of the banks of Natal River, which falls into the Indian Ocean in about 29° 30' south latitude, and which constitutes the northern boundary of a country (now forming part of the Cape Colony) of the same name on the South East Coast of Caffraria, and so called by the Portuguese navigators who discovered it on Christmas day in the year 1498.

For the introduction of this truly magnificent species we are indebted to Professor Reinwardt of Leyden, who has liberally distributed bulbs of it to various collections both in this country and on the continent. It is by far the largest in growth, and in the beauty of its flowers it is not surpassed by any others of the genus. The plant seems to be quite as hardy as the *G. byzantinus*, and requires the same soil and treatment as that species.

Our drawing was taken from a plant which flowered in the open border at Mr. Knight's Nursery, King's Road, Chelsea, in the beginning of August last. The tube of the perianthium secretes abundantly a honey-like fluid. The generic name is explained at fol. 176. *D. Don*.



1. Portion of the Perianthium, with the Stamens.

2. Pistil.



no. 11. *Dianthus* var. *multiceps* L. *Hyssop* 1835

DIÁNTHUS carthusianorum.

Carthusian Pink.

Linnean Class and Order. DECANDRIA DIGYNIA.

Natural Order. CARYOPHYLLÆ. *Juss. gen. p. 299.*

DIANTHUS. Suprà fol. 231.

D. carthusianorum, glaucus; floribus aggregatis, petalis cuneatis serratis barbatis, bracteolis 4 cuneato-oblongis apice mucronatis, foliis linearibus trinerviis margine scabris.

Dianthus carthusianorum. *Linn. sp. pl. p. 586. hort. ups. p. 105. Smith in linn. trans. 2. p. 299. Pollich, pal. n. 409. Kniph. cent. 7. n. 22. Hoffm. germ. p. 147. Roth, germ. ed. 2. p. 475. Willd. sp. pl. 2. p. 671. Ait. hort. kew. ed. 2. v. 3. p. 78. Sims in bot. mag. t. 2039. Sibth. et Smith, fl. græc. 4. p. 82. t. 392. Decand. prodr. 1. p. 356.*

D. floribus aggregatis, squamis calycinis lanceolatis, corollis crenatis. *Guett. stamp. p. 284.*

Tunica Carthusianorum. *Scop. carn. n. 504.*

T. n. 899. *Hall. helv. 1. p. 392.*

Caryophyllus sylvestris vulgaris latifolius. *Bauh. pin. p. 209. Tourn. inst. p. 333.*

C. sylvestris. *Matth. valgr. 1. p. 530. Dalech. hist. p. 807.*

C. arvensis, calyculo florum numeroso. *Læsel. pruss. p. 39. t. 7.*

C. barbatus angustifolius. *Segu. veron. 1. p. 438. t. 8.*

Betonica sylvestris. *Fuchs. hist. p. 352.*

Dondernegelin. *Brunf. herb. 2. p. 58.*

Plant perennial, cespitose. *Stems* many, erect, cylindrical, smooth, about a foot high, with distant joints. *Leaves* linear, acute, recurved, channelled, glaucous, rough at the edges, with extremely minute teeth, from three to five inches long, traversed by three nerves. *Flowers* aggregate, from three to five, or more. *Bractes* cuneately oblong, scariose, adpressed, with a long, awl-shaped, erect, scabrous point; those of the calyx most frequently four, but sometimes six. *Calyx* cylindrical, tubular, furrowed, dark red, with ovate-oblong, acute, membranously bordered teeth. *Petals*, the claws

linear, white, shorter than the calyx; the lamina of a rich pink, cuneiform, sharply serrated, sparingly bearded with reclining hairs. *Stamens* 10, unequal. *Filaments* awl-shaped, glabrous, white. *Anthers* incumbent, violet, of two parallel cells. *Ovary* cylindrical, surrounded at the base by a yellow fleshy ring. *Styles* two, filiform, white. *Stigmas* longitudinally papillose, with pale purple points.

A common continental species, especially in France and Italy, but never found with us in a wild state. We have seen it growing abundantly about Paris, along with the *Veronica spicata* and *Ajuga genevensis*. It has been noticed by Botanical writers as early as the *Dianthus barbatus*, but being much less showy than that species, it has not been prized as an ornamental plant, and it is consequently but rarely met with in cultivation, except in Botanic gardens. It continues to send forth a succession of flowering stems throughout the summer and autumn months, and when well grown it will be found to form a very pretty addition to the flower border. The specimens whence our drawing was taken, were communicated in June last, by our friend Mr. Malleson from Sundridge Park, Kent, the seat of Sir Samuel Scott, Bart. The plant had been raised there from seeds collected near Naples by the Hon. William T. H. Fox Strangways. It will be found to thrive best in a light sandy loam, and it may be increased by seeds and cuttings. As the flowers are small, we would recommend its being sown or planted in patches as it will then have a good effect.

For the meaning of the generic name see fol. 231. *D. Don.*



1. Organs of reproduction.

2. Pistil separate.



... .. 1825

RHINOPÉTALUM Karelini.

Mr. Kareline's Rhinopetalum.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. LILIACEÆ. *Brown prodr.* 1. p. 295, in notâ.

RHINOPETALUM. *Perianthium* 6-phyllum, coloratum, deciduum, demùm recurvato-patens: *foliolis* basi foveâ nectariferâ nudâ auctis; *supremo* profundius foveolato posticèque cornuto! *Stamina* 6, subæqualia: *filamenta* conniventia, barbata: *antheræ* basi insertæ, erectæ. *Ovarium* 3-gonum, 3-loculare: *valvis* medio septiferis. *Ovula* plura, obovata, ventricosa, lævia, duplici ordine disposita. *Stylus* subfiliformis. *Stigma* indivisum, truncatum. *Capsula*

Planta (uralensis) *bulbosa*, habitu *Fritillariæ*, *bulbo* e *squamis crassis paucissimis composito*. *Folia lanceolata, subconvoluta*. *Flos terminalis, solitarius, pallidè lilacinus*.

Obs. Genus ab omnibus facilè distinguitur stigmate indiviso ovulisque subrotundis.

R. Karelini. *Fisch. MSS.*

Plant with the habit of *Fritillaria pyrenaica*, and like it of a glaucous hue. *Bulb* orbicular, depressed, composed of two or three broad, thick, fleshy scales. *Stem* erect, simple, flexuose, cylindrical, slightly purplish, clothed with minute, papillose pubescence, three inches high, and about the thickness of packthread. *Leaves* alternate, stem-clasping, lanceolate, acute, concave above, convex and obscurely nerved below, the edges rather convolute, fleshy, glaucous, slightly waved and twisted, copiously and minutely pubescent on both sides, but especially beneath, an inch and a half long; uppermost almost linear and more pointed; the primordial ones broad, lanceolate, straight, stalked, and attenuated at the base. *Flower* terminal, solitary, drooping, about double the size of those of *Gagea lutea*. *Perianthium* hexapetaloid. *Sepals* equal, linear-oblong, blunt, at first connivent, afterwards spreading, with recurved points, pale pink, marked with rounded deeper coloured dots, the base callous, and furnished with a broad, yellow, nectariferous pit, spotted with brown, the uppermost one broadest, and furnished at the base with a deeper pit, which projects behind into a short, thick, blunt, helmet-shaped

spur, directed forwards. *Stamens* 6, nearly equal, and about as long as the perianthium. *Filaments* awl-shaped, white, connivent at the base, copiously clothed with short papillose hairs. *Anthers* olive-green, thickly dotted with brown-purple, cordate-oblong, erect, inserted by the emarginate base, 2-celled, the cells parallel, opening lengthways and interiorly, the connectivum terminating in a short, blunt point. *Pistil* rather shorter than the stamens. *Ovarium* 3-celled, 3-sided, with the valves septiferous at the centre. *Ovula* many in each cell, and arranged in a double series, obovate, ventricose, smooth. *Style* filiform, purple, slightly attenuated towards the top, longer than the ovarium. *Stigma* an abrupt, papillose dot.

This curious plant, constituting one of the most remarkable genera of the whole family to which it belongs, was discovered by M. Karéline in the steppes or deserts of the Indersky Sea, on the southern part of the Ural, and communicated by him to Dr. Fischer of the Imperial Botanic Garden at St. Petersburg, whence bulbs were transmitted to our worthy friend Mr. Anderson of the Chelsea Botanic Garden, where the plant flowered in January last. From its locality, it will no doubt prove perfectly hardy in our climate, but being still extremely rare, Mr. Anderson has hitherto very judiciously kept it in a pit along with other more tender bulbous rooted plants. In habit it is not unlike small specimens of *Fritillaria pyrenaica*, and its bulbs exactly resemble those of that plant. A soil composed of equal parts of sandy peat and loam appears to be well suited for it.

The genus possesses the nectariferous pits found at the base of the sepals in *Fritillaria*, *Calochortus* and *Cyclabothra*, but the almost filiform style, perfectly undivided stigma, and rounded ovula, essentially distinguish it from those, as well as from every other genus of the family, and would seem to point out a close relationship between the *Liliaceæ* proper and *Asphodeleæ*.

The generic name refers to the spur-like process at the base of the upper sepal, and is compounded of *ῥιν ῥινος* a nose, and *πεταλον* a petal. *D. Don.*



1. Stamen.

2. Pistil.

3. Section of the Ovarium.



RHODODÉNDRON indicum; *var. speciosum*.

Showy Indian Rosebay.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. ERICACEÆ. *Trib.* 2. RHODOREÆ. *Don in edinb. phil. journ. July, 1834. p. 152.*

RHODODENDRON. Suprà fol. 10.

Sect. 6. Calycis limbo foliaceo 5-partito, corollâ campanulatâ, staminibus 5-10, ovario 5-loculari, foliis membranaceis sempervirentibus hispide pilosis. Sp. Chinenses.

R. indicum, decandrum; foliis obovato-oblongis planis ramulisque adpressè setosis, floribus subsolitariis, segmentis calycinis lanceolatis acutis strigosis, corollæ limbo tubo duplò longiore.

Rhododendron indicum. D. Don in edinb. phil. journ. 1821. G. Don gen. syst. gard. & bot. 3. p. 845.

Azalea indica. Linn. sp. pl. p. 214. Thunb. jap. p. 84. Willd. sp. pl. 1. p. 831. Ait. hort. kew. ed. 2 v. 1. p. 318. Sims in bot. mag. t. 1480. Lodd. bot. cab. t. 275.

Chamærhododendron exoticum, amplissimis floribus liliaceis. *Breyn. prodr. 1. p. 23. ed. alt. p. 16.*

Cistus indicus, Ledi alpini foliis et floribus amplis. *Herm. lugdb. p. 152. t. 153. Raii hist. p. 1895.*

Tsutsusi. Kæmpf. amæn. p. 845. t. 846.

ε. speciosum, foliis lanceolatis mucronulatis, floribus purpureis majoribus.

Stem arboreous, from four to six feet high. *Branches* ascending, leafy, thickly clothed with brown adpressed bristles. *Leaves* lanceolate, mucronulate, veiny, light green, attenuated at the base, the edges slightly recurved, and as well as the ribs and veins furnished with brown adpressed bristly hairs, two or three inches long, and half an inch to an inch in breadth. *Footstalks* scarcely half an inch long, semicylindrical, bristly. *Flowers* terminal, mostly in pairs. *Peduncles* about half an inch long, cylindrical, bristly. *Calyx*

5-partite, the segments leafy, membranous, lanceolate, acuminate, bristly, as long as the peduncles. *Corolla* large, campanulate, purple; limb about three inches across, spreading, deeply 5-lobed, with broadly elliptical, blunt, even segments, the three upper ones rather larger, and marked with deeper coloured spots. *Stamens* ten, unequal, declinate, about as long as the corolla. *Filaments* slender, capillary, purple, the lower half copiously papillose. *Anthers* nearly black, very short, opening at the top by two pores. *Ovary* 5-celled, copiously clothed with silvery bristles. *Style* slender, glabrous, purple, longer than the stamens. *Stigma* blunt.

This splendid variety was raised at Coombe Wood, the seat of the late Earl of Liverpool, by Mr. William Smith, who has now transferred his choice collection of Roses and Rhododendrons to Norbiton Common, near Kingston, Surrey, where he cultivates an ample store of novelties for sale. It was raised in 1830 from seeds obtained from *R. indicum*, that had been impregnated with the pollen of *phœniceum*. It is nearly hardy, and a very free flowerer, beginning to blossom about the first of May.

It much resembles the variety figured at TAB. 154, but the flowers are larger and decandrous, and the plant is altogether more showy.

Figures 1 and 2 in our plate, represent the flowers of two other varieties raised from the same seed, one of them frequently becoming semi-double.

For the meaning of the generic name see fol. 10. *D. Don.*





RHODODÉNDRON venustum.

Lovely Rosebay.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. ERICACEÆ. **Trib.** 2. RHODOREÆ. *Don in edinb. phil. journ. July, 1834. p. 152.*

RHODODENDRON. *Suprà fol. 10.*


Sect. 2. *Calycis limbo abbreviato 5-lobo, corollâ campanulatâ, staminibus 10, capsulis 8-10-ocularibus, foliis coriaceis sempervirentibus. Sp. indicæ.*

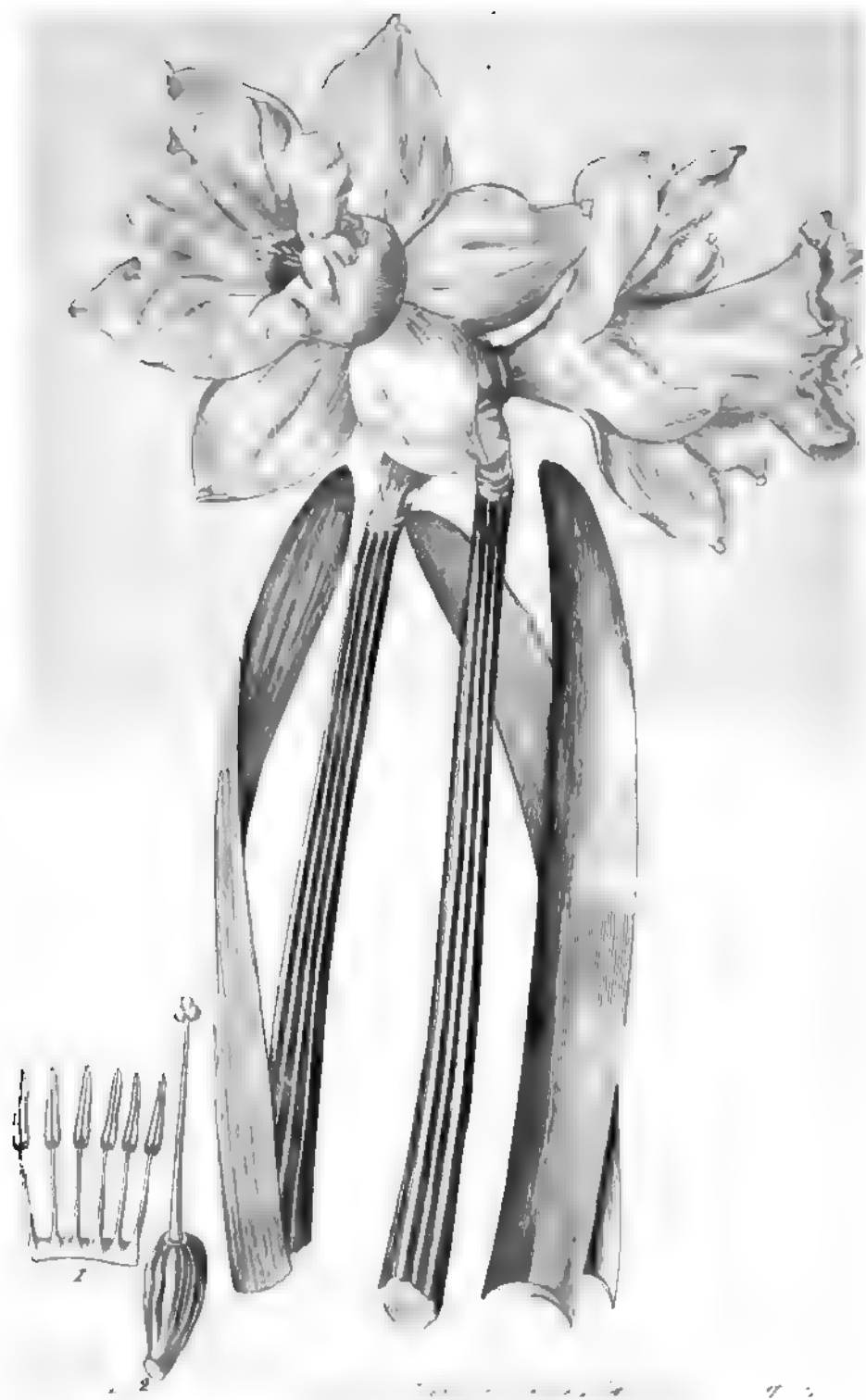
R. venustum, foliis sempervirentibus elliptico-oblongis subtùs ferrugineis, corollâ campanulatâ : lobis emarginatis crispatis, ovariis 8-ocularibus tomentosis.

A very dwarf and bushy evergreen shrub, not exceeding 8 inches in height. *Branches* round, glabrous, dark red, leafy. *Leaves* 4 or 5 inches in length, by 2 in breadth, oblong-elliptical, rather pointed, coriaceous, dull green, and veiny above, rusty brown beneath, with a stout red midrib, the edges slightly recurved. *Footstalks* scarcely half an inch long, stout, rounded, dark red, marked above by a shallow furrow. *Flowers* about 15, in a compact cluster. *Peduncles* cylindrical, an inch long, pale red, silky. *Calyx* silky and fringed, 5-lobed, the lobes short, rounded, membranous. *Corolla* campanulate, 5-lobed, of a rich pink, marked inside all round with dark red spots; lobes oblong, notched, wavy, and crumpled at the edges, which are also of a much paler colour, being nearly white. *Stamens* 10, declinate, shorter than the corolla. *Filaments* awl-shaped, white, copiously hairy at the base. *Anthers* yellow, apparently quite perfect, opening at the top by two pores. *Ovarium* copiously downy, 8-celled. *Style* filiform, declinate, longer than the stamens, thickened at the top. *Stigma* projecting beyond the corolla, rounded convex, viscid.

An exceedingly showy and interesting plant, raised by Mr. William Smith in 1829, from seeds of *Rhododendron caucasicum* that had been fertilized by *arboreum*. It partakes of the female parent in habit and stature, but agrees with *arboreum* in the more essential parts of its structure, particularly in its downy, many-celled ovarium, and this we find to be the case in all the hybrids of this genus which we have examined, they partake of the habit and constitution of the female parent, but agree with the male in the more essential parts of structure, and they are mostly reducible to the same species with the male parent. All the hybrids of *arboreum* suffer a reduction of two in the number of cells to the ovarium.

Our drawing was taken in the early part of March, at Mr. Smith's Nursery, Norbiton Common, near Kingston, Surrey. The plant was not more than eight inches high, and had two large clusters of fifteen flowers each, of a rich pink, marked inside with dark red spots. It is quite hardy, and is easily increased by layers. Mr. Smith is already in possession of a good stock of young plants of it. The generic name will be found explained at fol. 10. *D. Don.*





NARCISSUS maximus.

Great Daffodil.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

NARCISSUS. *Perianthium* infundibuliforme : limbo 6-partito, patente : coronâ campanulatâ, plerumque integrâ. *Stamina* tubo inserta. *Stigma* trilobum. *Capsula* 3-locularis, 3-valvis, polysperma.

Plantæ bulbosæ, plerumque europææ. *Spatha monophylla, latere dehiscens, 1-multiflora.* *Flores flavi v. albi.* *Semina subrotunda, bi v. trifaria, lævia, basi exteriori liberâ fungoso-callosâ.*

**** Coronâ faucis tubulosâ sæpiùs laciniarum longitudine, staminibus extra tubum exsertis subæqualibus conniventibus, spathâ uniflorâ.** Ajax.

N. maximus, perianthii laciniis ovatis patentibus tubo duplò longioribus, coronâ infundibuliformi laciniarum longitudine : limbo patenti 6-lobo inciso-crenato, foliis planis.

Ajax maximus. *Haworth monogr.* p. 3.

A. propinquus, a. *Ejusd. revis. narciss.* p. 116.

Narcissus totus luteus, calice prælongo. *Rudb. elys. t.* 71. f. 9. (bona.)

Scapes erect, round, solid, deeply fluted; from a span to a foot high. *Leaves* about the length of the scape, broadly linear, blunt, plain and even, glaucous green. *Spathes* monophyllous, scariosely membranous, pale brown, split laterally, one-flowered. *Perianthium* funnel-shaped, of a deep yellow; tube turbinate, very short, greenish yellow; limb deeply 6-parted, with ovate, pointed, spreading, slightly twisted segments; crown dilated, funnel-shaped, rather longer than the segments, the limb spreading, 6-lobed, lobes round, overlapping each other at the base, deeply and unequally crenated, and waved. *Stamens* 6, equal, connivent, shorter than the crown. *Ovarium* turbinate, deeply furrowed. *Style* longer than the stamens. *Stigma* with 3, rounded, papillose, spreading lobes.

Nearly related to *N. propinquus*, but differing in the greater size of all its parts, broader leaves, wider spreading, and deeper lobed crown.

Our drawing was taken from a bulb which flowered in Mr. Haworth's collection in April 1831. It appears to be an uncommon species, for we have in vain looked for it in other collections around the metropolis. The figure in the rare *Campi Elysii* of Rudbeck is a tolerably faithful representation of our plant. Mr. Haworth has attempted to separate *Narcissus* into several genera, but, although his divisions are for the most part strictly natural, they cannot be regarded in any other light than as sections of a very natural genus, as they rest entirely on differences of degree, and not on those of actual structure, a consideration that ought to be borne in mind in the construction of new genera and in the dismemberment of old.

With regard to the claims of the present to the rank of a species, we place an entire reliance on the opinions of our late lamented friends, Mr. Haworth and Mr. Sweet, who had bestowed great attention to the study of this genus, and whose practical knowledge in this and other difficult tribes of plants was rarely, if ever, equalled.

For the explanation of the generic name, see fol. 92.—
D. Don.



1. Stamens.

2. Pistil.



20

Prunella vulgaris L. *Prunella vulgaris* L. 17. 18. 19. 20. 21. 22. 23.

ABUTILON pulchellum.

Fragrant Abutilon.

Linnean Class and Order. MONADELPHIA POLYANDRIA.

Natural Order. MALVACEÆ. *Juss. gen. p.* 271.

ABUTILON. *Calyx* ebracteatus, 5-fidus. *Styli* apice soluti. *Carpella* 5—30, polysperma, sæpè vesicaria.

Plantæ plerumque fruticosæ, foliis petiolatis indivisis, floribus terminalibus axillaribusve.

• *Carpellis* 5—8.

A. pulchellum, stellato-pubescent, fruticosum; foliis ovato-lanceolatis cordatis grossè crenatis, racemis axillaribus, stylis solutis, carpellis 5 dispermis.

Abutilon pulchellum. *G. Don gen. syst. gard. & bot.* 1. p. 501.

Sida pulchella. *Bonpl. nav. t.* 2. (bona.) *Willd. enum. p.* 724. *Decand. prodr.* 1. p. 468. *Hooker in bot. mag. t.* 2753.

An upright, branching shrub, rising to the height of 6 or 8 feet, covered with a dark olive-coloured bark. *Branches* round, twiggy, tough and flexible; the younger ones and leaves sparingly clothed with starry pubescence. *Leaves* stalked, deciduous, cordate-oblong, rather attenuated towards the apex, but not pointed, the border cut with broad, rounded, rather unequal crenatures, dark green and shining above, paler and veiny beneath, about an inch and a half long; the posterior lobes rounded and rather connivent. *Footstalks* about an inch long, semicylindrical, equal. *Stipules* small, lanceolate, acute, persistent. *Racemes* axillary, solitary, erect, shorter than the leaves. *Flowers* from 10 to 15, very small, white, fragrant like those of the hawthorn. *Pedicels* very short, cylindrical, glabrous, thickened at the top, and furnished at the base with a small, ovate, pointed, membranous, caducous bracte. *Calyx* campanulate, membranous, naked, with 5 ovate pointed teeth. *Petals* 5, oblong, blunt,

exceeding the calyx, bearded at the base. *Stamens* about 15. *Filaments* connate, white, forked at the top. *Anthers* yellow, unilocular, with two prominent valves. *Styles* 5, free. *Stigmas* spatulate, minutely papillose. *Carpels* 5, concrete, hairy, 2 or 3-seeded, opening by two mucronulate valves.

We have carefully compared our plant with the figure and description given by Bonpland, and there cannot, we think, be doubt as to their identity. The valves of the carpels being pointed when open, have doubtless led M. Bonpland to describe them as awned. The plant is a native of New South Wales, and it appears to have been first discovered by the late Mr. George Caley. Our friend Mr. Allan Cunningham, to whom we are indebted for some valuable notes on the subject, found it on the banks of Cox's River, in the Blue Mountains. According to Mr. Cunningham the bed of that river is 2172 feet above the level of the sea, and as the thermometer falls there in winter below the freezing point, and as snow is seen to rest on the hills around, the hardy nature of the plant is easily accounted for. It appears to have been introduced to the gardens so early as 1810.

Our drawing was taken in the Spring of last year at the Chelsea Botanic Garden, where the plant has stood trained to a wall for several years without protection, growing vigorously, and flowering and perfecting its seeds freely. Its flowers, although small, are produced in great abundance, and diffuse an agreeable fragrance like that of the hawthorn.

The name *Abutilon* was applied by the Arabian physicians to a plant analogous to the Marsh Mallow, and has been adopted by modern writers for a genus of the same family. *D. Don.*



- | | | | |
|----------------------------|------------|----------------------------|----------------------|
| 1. Calyx. | 2. Petals. | 3. Organs of reproduction. | 4. Stamens separate. |
| 5. Calyx with the ovarium. | 6. Pistil. | 7. Carpels. | |



MUTISIA latifolia.

Broad-leaved Mutisia.

Linnean Class and Order. SYNGENESIA POLYGAMIA SUPERFLUA.
Natural Order. COMPOSITÆ. Fam. II. LABIATIFLORÆ. *Don in linn.*
trans. 16. p. 184. Trib. 3. MUTISIÆ.

MUTISIA. *Involucrum* polyphyllum, imbricatum. *Rhachis* nuda. *Flosculi radii* ligulati, fœminei; *disci* hermaphroditi, bilabiati. *Filamenta* papillosa. *Antheræ* basi bisetosæ. *Stylus* glaber. *Achenia* subrostrata. *Pappus* pluriserialis, plumosus.

Frutices (Amer. austr.) sæpè scandentes. Folia alterna, apice plerumque cirrhosa. Capitula solitaria, magna, speciosa, radiata. Corolla purpurea v. lutea.

M. latifolia, caule alato, foliis cordato-oblongis dentato-spinosis subtùs lanatis, involucri squamis appendiculatis, pappi radiis æqualibus truncatis.

Mutisia latifolia. *Don in l. c.* 16. p. 270.

Stems shrubby, scandent, winged, extending often to a considerable distance, the wings 3, broad, leafy, copiously armed with spinous teeth. *Leaves* cordate-oblong, rounded and emarginate, or often truncate, coriaceous, waved, and copiously furnished at the margin with spinous teeth, occasionally altogether entire, thickly clothed in the young state on both sides with intricate woolly hairs, the upper surface finally becoming glabrous, and of a light green, with the veins less conspicuous than in *ilicifolia*, the midrib broader at the base, and extending at the apex into a blunt, compressed, spirally convolute tendril, of 3 inches in length. *Capitula* solitary, nearly sessile. *Involucrum* large, cylindrical, about an inch long, woolly, imbricate, with oblong scales, the outer ones terminated by an ovate-lanceolate, sharp-pointed, leafy, spreading appendage; the innermost ones in a single series, with a broad, rounded, membranous, coloured apex, but destitute of an appendage. *Rhachis* naked. *Florets* those of the ray about 14, female, ligulate, bluntly 3-toothed, many-nerved, of a pale pink, furnished with 5 sterile stamens, and an inner labellum, composed of 2, very short, linear, erect segments; those of the disk about 30, hermaphrodite, purple, tubular, and bilabiate, the lips revolute, outer one ligulate, bluntly 3-toothed, inner one deeply parted into 2, linear, blunt, 2-nerved segments. *Stamens* 5, inserted into the tube. *Filaments* compressed, pubescent, jointed at the apex. *Anthers* yellow, exserted, united into a tube, crowned by a ligulate, blunt, coriaceous appendage, and furnished at the base with 2, compressed, channelled, branched, and often forked bristles. *Style* glabrous, with 5 angles, thickened at the base, the branches very short, blunt, and minutely papillose. *Achenia*

compressed, glabrous, slightly quadrangular, narrowed towards the top, the disk broad and flattened. *Pappus* of a grey colour, deciduous, the rays copious, arranged in a double series, feathery, equal, truncate at the apex, dilated at the base.

Flowering specimens of this curious and interesting plant were communicated in October last by the Rev. Townshend Selwyn, from his collection at Kilmington Rectory, Wilts, and we are indebted to his amiable and accomplished daughter, Miss Selwyn, for the beautiful drawing represented in our plate. It is a native of Valparaiso, in Chile, and is common on the hills about that town, climbing among bushes. We have native specimens gathered there by Messieurs Cuming and Bridges. It was introduced in 1832 from seeds collected by the former, and the plant is now not unfrequent in botanical collections, but our friend, Mr. Selwyn, is the only one who has yet succeeded in flowering it. The plant has been hitherto kept in the greenhouse, but from what we have ourselves remarked, we have no doubt of its succeeding well in the open border, planted by a trellis, or near to any tree that is trained to a wall, where it may have an opportunity of extending itself. Mr. Bridges describes the rays as pink, but in the cultivated plant they were nearly white, a circumstance perhaps owing to its flowering so late in the season, and therefore deprived of the requisite light and sunshine to develop the colouring matter.

The species comes near to *ilicifolia* of Cavanilles, the *spinosa* of Ruiz and Pavon, but is well distinguished by the presence of leafy appendages to the scales of the involucre, and by the equal truncate rays of the pappus. The leaves are also usually broader, more downy, and less conspicuously veined, and the stem and branches constantly winged.

The *Labiatifloræ* constitute after *Cichoraceæ* the most natural and well-defined group among the *Compositæ*. We prefer that name to those of *Mutisiaceæ* and *Nassauviaceæ* adopted by Cassini and Lessing, because it conveys at once to the mind the most striking characteristic of the family, and as *Mutisia* and *Nassauvia* cannot be regarded as typical genera, and still less can we agree to their separation into two distinct families. We had formerly proposed to remove *Chaetanthera* and some nearly related genera from the *Mutisiæ*, but we are now satisfied that they form but one tribe, and that the *Diazeuxæ* ought to be united to *Perdicieæ*.

The genus was named by Linnæus after his learned friend and correspondent Don Jose Celestino Mutis, chief of the botanical expedition to New Granada, many of whose interesting discoveries, and among others a species of the present genus, are recorded in the *Supplementum Plantarum* of the younger Linnæus. *D. Don.*



Chamaecyparis

Fl. et F. Algarves: 102. Succulentia. Dec. 1855



J. H. Smith

GÍLIA coronopifolia.

Bucks-horn-leaved Gilia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. POLEMONIACEÆ. *D. Don in edinb. phil. journ.* 1822. p. 56.

GILIA. Suprà fol. 218.

G. coronopifolia, foliis pinnatisectis: segmentis linearibus mucronatis, floribus paniculatis, corollæ tubo calyce 5-plò longiori: laciniis ovatis acutis planis.

Gilia coronopifolia. *Persoon synops.* 1. p. 187. *Lindl. in bot. reg.* t. 1691.

Ipomopsis elegans. *Mich. amer.* 1. p. 141. *Smith exot. bot.* 1. p. 23. t. 13.

Aiton hort. kew. ed. 2. v. 1. p. 342.

Cantua coronopifolia. *Willd. sp. pl.* 2. p. 879. *Andr. bot. rep.* t. 415.

Pursh. fl. amer. 1. p. 147. *Elliott fl. carol.* 1. p. 260.

Polemonium rubrum. *Linn. sp. pl.* 1. p. 231.

Ipomœa rubra. *Ejusd. syst. veg.* p. 171.

Quamoclit pennatum erectum, floribus in thyrsum digestis. *Dill. elth.* 2. p. 321. t. 241. f. 312. (bona.)

Root fibrous, annual. *Stem* erect, cylindrical, branched, 4 or 5 feet high, copiously clothed, like the rest of the plant, with glandular pubescence. *Leaves* alternate, stalked, deeply pinnatifid, almost pinnate, with narrow, linear, mucronate, entire, distant, channelled segments; the terminal one larger; those towards the upper part of the stem and bractes linear, mucronate, undivided, an inch or an inch and a half long. *Flowers* copious, paniculate, less crowded than in *G. aggregata*. *Calyx* campanulate, membranous, the interstices scariose, with awl-shaped, spinously pointed, erect segments, exceeding the tube in length. *Corolla* funnel-shaped, copiously glandular outside, scarlet, the tube 4 or 5 times longer than the calyx; limb spreading with 5 ovate, flat, abruptly pointed segments, marked above with small irregular white spots. *Filaments* slender, capillary, glabrous, red, adherent to the tube of the corolla nearly as far as the sinus. *Anthers* incumbent, yellow, composed

of 2 parallel connate cells. *Ovarium* 3-sided, 3-celled. *Style* slender, filiform, longer than the corolla. *Stigmas* 3, semi-cylindrical, recurved, minutely papillose above. *Capsule* 3-celled, 3-valved, shorter than the calyx. *Seeds* angular, several in each cell.

Few annual plants are seen in our gardens of equal beauty to the present, which is a native of the upper districts of Carolina and Georgia, on the banks of rivers, in sandy soil, where it was first found by Catesby, and plants of it were raised in Sherard's famous garden at Eltham about 1725, from seeds brought by that zealous collector. The plant has been introduced several times since, but from its having rarely perfected its seeds, it has seldom been preserved beyond the first year.

Linnæus first referred the plant to *Polemonium*, but he afterwards less happily removed it to *Ipomæa*, having been most probably influenced in this opinion by Dillenius, who regarded it as belonging to that genus. Michaux, or rather the elder Richard, separated it as a distinct genus under the name of *Ipomopsis*, but it has since very properly been united to *Gilia*, a genus previously published by Ruiz and Pavon.

It is very nearly related to *G. aggregata*, given at TAB. 218. of the present volume, but differs in its looser inflorescence, and in the broader, spreading, and less pointed segments of its corolla.

We would recommend the seeds to be sown in the autumn, and the young plants to be preserved in the pit or greenhouse through the winter, and to be planted out about the middle of May, in a shady border, and in a sandy soil. Treated in this way the plants will come early into flower, and will be more likely to ripen their seeds.

Our drawing was taken in August last at Park Lodge, Blackheath, the seat of Lord Auckland, where the plant was more than usually vigorous, having attained the height of 6 or 7 feet.

For an explanation of the generic name, see fol. 218. *D. Don.*



1. Radical leaf.
insertion of the stamens.

2. Portion of the tube of the corolla shewing the
3. Ovarium.

MORÍSIA hypogæa.

Ground Cress.

Linnean Class and Order. TETRADYNAMIA SILIQUOSA.

Natural Order. CRUCIFERÆ. *Juss. gen. p.* 237.

MORISIA. *Siliqua* lomentacea, biarticulata : *articulis* crustaceis, globosis, corrugato-sulcatis, bilocularibus ; *superiore* breviter rostrato, *loculis* 1-spermis ; *inferiore* majore, *loculis* 3-spermis. *Cotyledones* planæ! incumbentes. *Herba* (Sardoa) *cæspitosa*, *radice* *perenni*. *Folia* *runcinata*. *Scapi* *uniflori*. *Flores* *lutei*.

Obs. Genus *Erucaræ* tam habitu quàm characteribus simillimum, sed longè differt *cotyledonibus* planis rectis nec replicatis. *D. Don Mss.*

M. hypogæa. Hort. Taurin.

Plant apparently perennial, forming a little compact tuft. *Root* long, fusiform. *Scapes* many, single-flowered, cylindrical, glabrous, about as long as the leaves, slightly attenuated at the top. *Leaves* runcinate, glabrous, of a bright green, polished, about 2 inches long, on a short foot-stalk ; segments ovate-oblong, entire, or occasionally furnished at the lower edge with a single tooth, and mostly terminated by a short diaphanous bristle ; the terminal one larger, ovate, 3-lobed, somewhat diamond-shaped. *Foot-stalks* and *rhachis* fringed with spreading bristly hairs. *Calyx* slightly pubescent, with oval, blunt, connivent sepals. *Petals* wedge-shaped, bright yellow, entire, double the length of the calyx. *Stamens* 6 ; 4 longer. *Filaments* simple, slightly compressed, glabrous. *Anthers* oblong, of two parallel cells. *Ovarium* ovate, furnished at the base with two awlshaped glands. *Style* longer than the ovarium, cylindrical, stout. *Stigma* capitate, papillose. *Pod* short, biarticulate, both joints bilocular, crustaceous, globose, wrinkled, upper articulation surmounted by the persistent style, lower one larger, bristly ; cells of the lower articulation

three-seeded, of the upper one-seeded. *Seeds* rounded oval, brown, suspended by a flat, white, umbilical chord, with a thin cartilaginous testa. *Embryo* white. *Cotyledons* oval, even, incumbent. *Radicle* dorsal, compressed, obtuse, rather shorter than the cotyledons.

Introduced by Mrs. Palliser from the Valentino (the Royal Botanic Garden at Turin), from seeds presented to her by Professor Moris, who discovered the plant on the mountains of Sardinia. It is perennial and quite hardy, and appears well suited for rockwork, where its numerous bright yellow blossoms contrasted with its deep green polished leaves would doubtless produce a good effect. It requires a light loamy soil, and is readily increased by seeds which should be sown immediately they are ripe. It derives its specific name from its capsules burying themselves in the ground like some of the *Viola*.

Our drawing was taken from Mrs. Marryat's collection in April 1834. Having missed the opportunity of seeing the ripe fruit in the living plant, Mr. Bentham very obligingly allowed us to examine the native specimens contained in his Herbarium. The plant in habit and structure comes very near to *Erucaria*, except in having even, not folded Cotyledons, a remarkable character, which removes it entirely from that group, and we know of no other with which it can be associated. The genus was dedicated to its discoverer, Professor Moris, but by whom instituted we are at present unacquainted. *D. Don.*



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|-------------------------------|--------------------------------------|-------------|------------|
| 1. Calyx. | 2. Petal. | 3. Stamens. | 4. Pistil. |
| 5. Capsule with the peduncle. | 6. Longitudinal section of the same. | | |
| | 7. Seed. | | |



et del. J. P. R. 1835. J. P. R. 1835.

J. W. Smith.

RHODODÉNDRON nudiflorum ;

var. eximium.

Choice Rosebay.

Linnean Class and Order. DECANDRIA MONOGYNIA.

Natural Order. ERICACEÆ. Trib. 2. RHODOREÆ. *Don in edinb. phil. journ. July, 1834. p. 152.*

RHODODENDRON. Suprà fol. 10.

Sect. 7. Calycis limbo abbreviato 5-lobo, corollâ infundibuliformi, staminibus 5, capsulis 5-ocularibus, foliis membranaceis deciduis. Pentanthera.

R. nudiflorum, pentandrum ; foliis lanceolatis acutis membranaceis ciliatis, corollâ infundibuliformi pilosâ, laciniis calycinis brevissimis rotundatis ciliatis, staminibus corollâ duplò longioribus, ovariis pilosis.

Rhododendron nudiflorum. *Torr. fl. un. st. 1. p. 140. G. Don. gen. syst. gard. & bot. 3. p. 847.*

Azalea nudiflora. *Linn. sp. pl. p. 214. Curt. bot. mag. t. 180. Pursh fl. amer. 1. p. 152. Ait. hort. kew. 1. p. 319.*

μ. eximium, floribus decandris, laciniis calycinis ovato-lanceolatis, corollis puniceis : lobis obtusis undulatis ; superiore disco maculato, foliis sempervirentibus.

A bushy, erect, evergreen shrub. *Branches* clothed with rough pubescence. *Leaves* lanceolate, acute, membranous, light green, veiny, and glabrous above, pubescent beneath, attenuated at the base, with a prominent midrib, an inch and a half to two inches long, half an inch or more in breadth, the edges slightly recurved. *Footstalks* 3 lines long, semicylindrical, pubescent, green. *Clusters* of from 10 to 12 flowers, corymbose. *Peduncles* short, stout, cylindrical, clothed with glandular pubescence. *Calyx* glandular, with 5, ovate-lanceolate, obtuse, rather leafy segments. *Corolla* about an inch and a half long, crimson, funnel-shaped, finely pubescent, with 5, elliptical, rounded,

slightly waved lobes, each furnished with a line of white hairs down the centre; upper one broader, and marked with deeper coloured spots. *Stamens* 10, declinate, projecting considerably beyond the corolla. *Filaments* slender, filiform, pale pink, white below. *Anthers* short, incumbent, orange brown, opening at the top by two orbicular foramina. *Ovary* oblong, copiously pubescent, 5-celled. *Style* filiform, glabrous, pale red, longer than the stamens. *Stigma* large, capitate, viscid.

This is another of those splendid productions raised by Mr. William Smith, whose success in this department of horticulture stands unrivalled. It was raised by him in 1829, from seeds of the variety *coccinea major* of *Rhododendron nudiflorum* that had been fertilized by *arboreum*, and except in its evergreen leaves, and decandrous flowers, it agrees almost entirely with the former species, having less affinity with *arboreum* than any of the other hybrids from that species, which we have seen. The plant appears to be quite hardy, is readily multiplied by layers, and from the beauty of its flowers is well deserving of a place in every garden.

Our drawing was taken from specimens communicated by Mr. Smith from his collection at Norbiton Common, near Kingston, in the early part of last month.

In the preceding number of this work we have figured and described another beautiful mule *Rhododendron*, raised also by Mr. Smith, but in the text we inadvertently omitted to mark it as a variety, and we have therefore to request our readers to alter the name to *R. arboreum* var. *venustum*, it being far from our intention to attempt to elevate these garden productions to the rank of species.

The generic name will be found explained at fol. 10. *D. Don.*



1. Pistil with the calyx.

2. Ovary transversely cut.



Trifolium pratense

Collected by T. B. Gregory 169, Broadway, June 1, 1895.

ANTHYLLIS Webbiana.

Rose-coloured Kidney-Vetch.

Linnean Class and Order. DIADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. *Juss. gen. p.* 345.

ANTHYLLIS. *Calyx* tubulosus 5-dentatus post anthesin persistens, plus minusve vesicarius inflatus. *Corollæ* alæ et carina vexillo subæquales. *Stamina* omnia connexa. *Legumen* ovatum 1-2-spermum, rarius oblongo-lineare polyspermum semper calyce induriato tectum.

Herbæ aut Frutices habitu vario. Decand. prodr. 2. p. 168.

* *Capitulis bracteatis, calycibus defloratis inflatis, leguminibus 1-2-spermis calyce inclusis, foliis impari-pinnatis.* Vulneraria.

A. Webbiana, herbacea, sericeo-argentea; foliolis ellipticis acutis subæqualibus, bracteis palmatis.

Anthyllis Webbiana. *Hooker in bot. mag. t.* 3284.

Plant perennial, cespitose, densely clothed with adpressed silky hairs. *Stems* many, prostrate, filiform, branched, a span long. *Leaves* impari-pinnate. *Leaflets* elliptical-oblong, pointed, rather fleshy, copiously silky, on a short, partial stalk, mostly opposite; the terminal one rather larger. *Racemes* capitate, nearly sessile. *Heads* round, many-flowered. *Bractes* palmate, with ovate mucronulate lobes. *Calyx* inflated, thin, membranous, white, densely hairy, with a dull purple border; the lower lip of 3 ovate-lanceolate, acuminate, spreading, somewhat feathery teeth, the upper one broad, concave, cloven with shorter connivent teeth. *Corolla* rose-coloured. *Petals* 5, with connate claws. *Vexillum* oval, glabrous, notched, the margins revolute. *Wings* adpressed, glabrous, with a callous tooth at the base. *Keel* much shorter than the wings, white, with a dark-red, truncate, glossy apex. *Stamens* 10, monadelphous. *Filaments* glabrous, those of the longer stamens clavate, of the shorter furnished with a hollow cup-shaped apex. *Anthers*

yellow, with parallel connate cells. *Ovarium* ovate, pointed, glabrous, monospermous, elevated on a filiform pedicel. *Style* slender, filiform, glabrous, longer than the stamens. *Stigma* terminal, white, minutely papillose. *Pod* semi-ovate, inclosed in the calyx, with a compressed winged border, crowned by the persistent style, one-seeded. *Seed* oval, ventricose, glabrous, attached by the centre. *Cotyledons* oval, flat, incumbent. *Radicle* cylindrical, obtuse, slightly curved, shorter than the cotyledons.

A native of the Peak of Teneriffe, whence it was introduced to our gardens about three years ago by Mr. Webb, after whom the species has been named, and who is now engaged in preparing for publication a Flora of the Canary Islands, for which he has been collecting materials for some years.

The present plant comes so very near to *A. Vulneraria*, that we can scarcely believe it to be more than a variety of that species, differing solely in its more copious silky pubescence. It will be found to thrive in any light sandy soil, and is well suited to ornament rockwork.

Our drawing was taken from plants which flowered in Mrs. Marryat's garden at Wimbledon, in the summer of last year.

The generic name is compounded of *ανθος*, a flower, and *ιουλος* a beard, and alludes to the shaggy calyx. *D. Don.*



- | | | | |
|--------------|----------|----------|----------------------------|
| 1. Vexillum. | 2. Keel. | 3. Wing. | 4. Organs of reproduction. |
|--------------|----------|----------|----------------------------|



PHLOX stolonífera ; var. crassifolia.

Fleshy-leaved creeping Phlox.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. POLEMONIACEÆ. *D. Don in edinb. phil. journ.* 1822. p. 56.

PHLOX. Suprà fol. 7.

P. stolonifera, stolonibus repentibus, foliis spathulato-obovatis. *Sims in bot. mag. t.* 563. *Ait. hort. kew. cd. 2. v. 1. p.* 326. *Pursh fl. amer. 1. p.* 150.

P. reptans. *Mich. amer. 1. p.* 145. *Vent. malm. t.* 107. *Ræm. et Schult. syst. 4. p.* 362. *Spreng. syst. 1. p.* 624.

β. crassifolia, major ; foliis crassioribus, floribus saturatiùs coloratis. *Phlox crassifolia.* *Lodd. bot. cab. t.* 1596.

Plant creeping. *Shoots* procumbent, filiform, pale purple, clothed with soft jointed hairs, 3 inches long. *Flowering stems* erect, 4 inches high, filiform, clothed with soft hairs. *Leaves* stalked, broadly spathulate, mucronulate, an inch long, half an inch wide, flat, rather succulent, margin and midrib fringed with soft hairs ; those of the stem oblong, blunt, faintly 3-nerved. *Footstalks* channelled, fringed. *Corymbs* few-flowered. *Peduncles* filiform, half an inch long, copiously clothed with glandular hairs. *Calyx* as long as the peduncles, deeply 5-partite, the segments lanceolate, acuminate, erect, connivent, the border narrow, scarious and white. *Corolla* salver-shaped, tube dark purple, twice the length of the calyx, sparingly clothed with glandular hairs ; limb spreading, purple, with plain, rounded, slightly crenulate segments. *Stamens* 5, inclosed, very unequal. *Filaments* slender, capillary, glabrous, white, adherent to the tube. *Anthers* oblong, obtuse, orange, incumbent, with two parallel, connate cells, opening lengthways. *Ovarium* triangular, acute, 3-celled, cells one-seeded. *Style* capillary, the apex project-

ing beyond the tube. *Stigmata* 3, short, semicylindrical, obtuse.

This very pretty dwarf *Phlox* was introduced from North America in 1825, and has been received into the garden Catalogues as a species; but although we have in vain looked for characters to distinguish it from *P. stolonifera* it is nevertheless more worthy of the attention of the florist from the larger size and much richer hue of its blossoms. The leaves are also broader and of a deeper green.

It is perfectly hardy, and is easily multiplied by division. It should be planted in a mixture of peat and loam, and is well fitted for the front of a flower border, or to ornament rockwork, where its trailing habit enables it to accommodate itself.

Our drawing was taken at the Botanic Garden, Chelsea, in the beginning of May.

For the meaning of the generic name see fol. 7. *D. Don.*



1. Tube of the corolla laid open to shew the insertion of the stamens.
2. Calyx with the pistil.



... ..

SYMPHYTUM caucasicum.

Caucasian Comfrey.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. BORAGINEÆ. *Juss. gen. p.* 128.

Trib. 2. SYMPHYTEÆ. D. Don in edinb. phil. journ. October, 1832.

SYMPHYTUM. Calyx 5-divisus. Corolla infundibuliformis, fauce ventricosa: limbo subcoarctato, 5-dentato. Appendices 5, subulatæ, conniventes, staminibus alternæ.

Herbæ (europææ) perennes, robustæ. Folia basi plerumque decurrentia. Racemi dichotomi, multiflori, ebracteati, demùm diffusi, subcorymbosi, terminales v. axillares.

S. caucasicum, foliis ovato-lanceolatis acutis basi decurrentibus, calycibus tubulosis 5-dentatis pedicellorum longitudine.

Symphytum caucasicum. Marsch. à Bieb. fl. taur. cauc. 1. p. 128. suppl. p. 128. Rœm. et Schult. syst. 4. p. 64. Spreng. syst. 1. p. 563. Graham in bot. mag. t. 3188.

Stems erect, angular, branched, scarcely 2 feet high, and clothed like the rest of the plant with recumbent bristly hairs. *Leaves* ovate-lanceolate, acute, wrinkled, entire, from 3 to 7 inches long; the radical ones on long, simple, channelled footstalks; those of the stem sessile, and unequally decurrent at the base. *Racemes* forked, many flowered, furnished at the base with a single leafy bracte. *Pedicels* angular, bristly, about 3 lines long. *Calyx* tubular, five-angled, ribbed, as long as the pedicels, with 5, ovate, blunt, connivent teeth. *Corolla* funnel-shaped, twice longer than the calyx, before expansion of a rich pink, afterwards changing to an azure blue, the mouth ventricose, with 5, shallow, rounded, revolute lobes. *Filaments* glabrous, slightly compressed, blue. *Anthers* cream-coloured, as long as the filaments, composed of two distinct parallel cells, opening lengthways. *Appendages* ligulate, blunt, papillose, longer than the stamens. *Style* longer than the corolla. *Stigma* small, capitate.

This is a highly ornamental plant, having the brilliant blossoms of *Symphytum asperrimum* united to the more delicate habit of *S. orientale*, between which one might imagine it to be a spontaneous hybrid, so completely does it combine the characters of these two species.

It is found abundantly in moist shady places on the banks of the River Terek between Mosdok and Kisljar, and on the borders of woods throughout the greater part of the northern promontory of Caucasus, flowering in May and June.

From its dwarf habit and the beauty of its flowers it is admirably adapted to ornament front borders, for which purpose the large and coarse habit of *S. asperrimum* renders it unsuited.

Drawn in the beginning of May last at the Chelsea Botanic Garden, where the plant had been introduced from the Imperial Botanic Garden at St. Petersburg.

The generic name alludes to the marvellous consolidating virtues which the plant was formerly supposed to possess, and is derived from the Greek word *συνφύσις*, signifying union. *D. Don.*



1. Corolla laid open to shew the stamens and appendages.

2. Pistil.

RHODÁNTHE Manglèsii.

Captain Mangles's Rhodanthe.

Linnean Class and Order. SYNGENESIA POLYGAMIA SUPERFLUA.
Natural Order. COMPOSITÆ. *Adans. fam.* 2. p. 103. Trib. GNAPHALIEÆ. *Less. comp.* p. 269.

RHODANTHE. *Involucrum* multiplici ordine polyphyllum, imbricatum, scariosum, coloratum, radiatum. *Rhachis* conica, glabra. *Flosculi disci* hermaphroditi, tubulosi, 5-dentati; *fæminei* uniseriales in ambitu, infundibuliformes, 5-dentati. *Filamenta* glabra. *Antheræ* basi bisetæ. *Styli rami* brevissimè appendiculati. *Achenia* compresso-tetragona, sericeo-villosa. *Pappi radiis* uniserialibus, plumosis, infernè liberis.

Herba (australasica) annua. Folia alterna, sessilia, integerrima. Capitula terminalia, pedunculata. Involucrum turbinatum, rubicundum. D. Don Mss.

R. Manglèsii.

Rhodanthe Manglèsii. *Lindl. in bot. reg. t.* 1703.

Root fibrous, annual. *Stem* slender, filiform, wiry, glabrous and shining, from a span to a foot high, with wavy branches, pale green, slightly stained with purple. *Leaves* sessile, elliptical-oblong, mucronulate, entire, glabrous, glaucous, an inch long, veinless, finely dotted, the base adnate or decurrent. *Capitula* drooping, on slender capillary footstalks of 2 or 3 inches in length, which are furnished at the apex with many, adpressed, short, scariose scales. *Involucrum* turbinate, radiate; scales imbricated, cuneate, green, the appendages ovate-lanceolate, plaited, scariose, coloured, glossy, torn at the apex, outer ones white, inner ones of a bright pink, and double the length of the florets. *Rhachis* depressed, conical, glabrous, dotted, even. *Florets* yellow, the tube pale green, the female ones disposed in a single series in the circumference, funnel-shaped, 5-cleft, with lanceolate acute segments, those of the disk numerous, hermaphrodite, tubular, with an inflated 5-tooth limb, the teeth ovate acute, the tube filiform, longer than the faux. *Filaments* capillary, glabrous. *Anthers* united into a tube, furnished with two short bristles at the base, and at the apex with a very short ovate acute membranous appendage. *Style* slender, filiform, glabrous, the branches semi-cylindrical, revolute, terminated by a very short, dilated, truncate,

papillose appendage. *Achenia* cuneate, four-sided, compressed, thickly clothed with adpressed silky hairs. *Pappus* white, the rays elegantly feathery, arranged in a single series, compressed and dilated below, cohering at the base only.

This very elegant everlasting is a native of Swan River, and was introduced in 1833, by Sir James Stirling, the Governor of that Colony, who presented the seeds to Mr. Mangles, in whose collection at Whitmore Lodge, Berkshire, the plant blossomed in the summer of last year. The plant whence our drawing was taken was obligingly sent us by Mr. Mangles in April last.

The genus is very nearly related to *Helichrysum*, from the normal group of which it is only distinguished by the presence of female florets, and by its feathery pappus. Indeed that genus as constituted by Lessing would include *Rhodanthe*.

We know not whether the plant has been tried in the open border, but we doubt not of its being found to succeed well treated after the manner of other tender annuals. Mr. Mackay, the gardener at Whitmore Lodge, has favoured us with the following interesting particulars respecting its introduction and culture.

“The seeds of *Rhodanthe Manglesii* were presented to Robert Mangles, Esq., of Whitmore Lodge, by Sir James Stirling in 1833, and part of them which were sown on a gentle heat, soon germinated and flowered the following summer. The plants had been confined in too small pots (sixties) and grew with less vigour, and with proportionably small and scantier blooms than when treated with richer mould and repeated shiftings, a plan I adopted with seedlings raised the following September from the remainder of the imported seeds. One of these was exhibited at the May meeting of the Horticultural Society, measuring from eighteen inches to two feet in height, and covered with hundreds of open flowers, and unexpanded rosy buds. It remained in flower nearly three months, which is not the case with plants raised from spring sowing.

“If kept through the winter in a light and airy part of the greenhouse they will not fail to do well, and will force tolerably well if placed in the stove in the beginning of February, flowering freely about the end of March.

“So soon as the greatest part of the flowers are expanded the flower stems and branches assume a singularly stiff and wiry character.”

The generic name is compounded of *ρόδον*, a rose, and *ανθος*, a flower, and alludes to the rosy heads. *D. Don.*



1. Female floret.

2. Male floret.

3. Stamens.

4. Stamen magnified.

5. Ovarium with the pappus.

20



2000. 1870

PRÍMULA ciliàta; var. purpuràta.

Purple-flowered fringed Auricula.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. PRIMULACEÆ. *Brown prodr.* 1. p. 427.

PRIMULA. Suprà fol. 5.

P. ciliata, foliis obovato-cuneiformibus grossè crenato-serratis villosulis subviscosis opacis, scapo angulato 2-5-floro, calycibus campanulatis tubo ferè triplò brevioribus. *Lehm. monogr.* p. 79.

Primula ciliata. *Schrank. primit. fl. salisb. no.* 186. *Braun. fl. salisb.* 1. p. 162. *Lam. ill.* p. 430. *Ait. hort. kew. ed.* 1. vol. 1. p. 194. (excl. *synon.*) *Ræm. et Schult. syst.* 4. p. 148. *Sweet suprà t.* 123.

P. villosa. *Suter fl. helv.* 1. p. 112. (excl. *synon.*) *Schleich. cent.* 1. pl. rar. no. 16.

P. foliis ciliatis dentatis, scapo paucifloro. *Hall. helv. no.* 613?

β. purpurata, umbellâ multiflorâ, floribus intensè purpureis.

The whole plant clothed with minute glandular pubescence. *Scapes* about 3 inches high, filiform. *Leaves* cuneately spathulate, spreading, fleshy, and leathery, copiously furnished with large, often unequal, angular, and rather blunt teeth, an inch and a half to 2 inches long, and an inch in breadth, marked above with rather elevated ribs. *Petioles* half an inch long, flat, 4 lines broad. *Umbels* of from 10 to 15 flowers. *Pedicels* slender, filiform, copiously pubescent, half an inch long. *Bractes* very short, ovate, obtuse, persistent. *Calyx* campanulate, copiously clothed with glandular pubescence, with ovate, acute, erect teeth, rather shorter than the tube. *Corolla* of the richest purple; tube glabrous, double the length of the calyx, swollen above, mouth and interior of the tube of a pale sulphur colour; limb deeply 5-lobed, about the length of the tube, the segments obcordate, with rounded lobes. *Stamens* 5, inclosed, inserted below the mouth. *Filaments* white, very short,

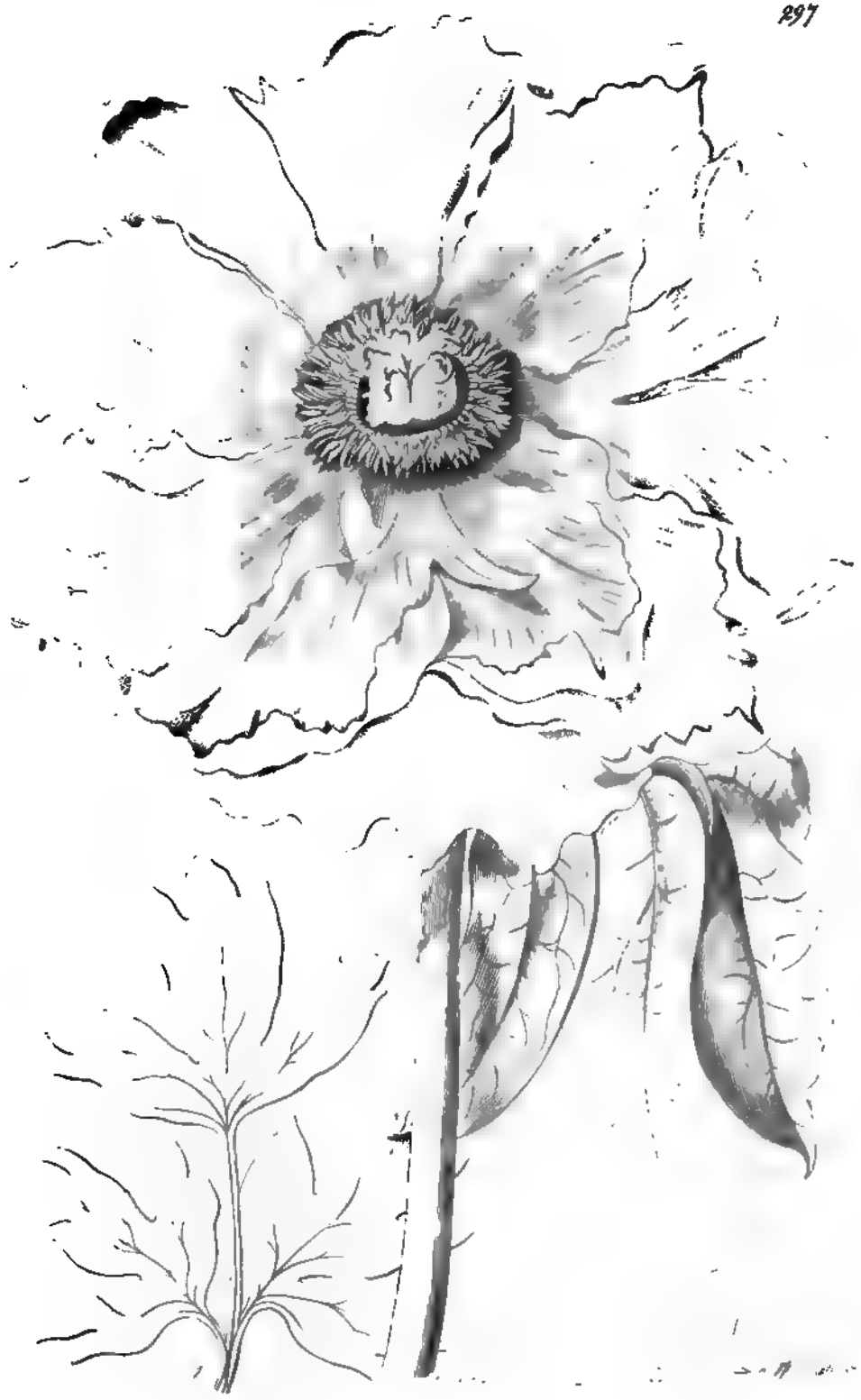
stout, compressed, glabrous, suddenly contracted at the top. *Anthers* linear, blunt, yellow, thrice longer than the filaments. *Pistillum* shorter than the calyx. *Ovarium* globose. *Style* filiform, about the length of the ovarium. *Stigma* large, capitate.

A flowering plant of this very pretty variety was communicated in April last, by Mr. Edward Leeds, Nurseryman, Manchester, who informs us that it is a hybrid production, raised in that neighbourhood from one of the numerous varieties of *Primula Auricula* and *P. villosa*, or rather *ciliata*. It is an extremely showy plant from the brilliancy of its blossoms, which it produces in great profusion. The tint of colouring it is almost impossible to imitate. The plant is of very easy culture, and requires the same treatment as the rest of the genus.

The generic name is already explained at fol. 5. *D. Don.*



1. Calyx.



PÆONIA Moutan ; var. punicea.

Red-flowered Tree Pæony.

Linnean Class and Order. POLYANDRIA DIGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen. p.* 231.

PÆONIA. Suprà fol. 238.

P. Moutan, caule fruticoso, foliolis summo apice trifidis, germinibus ~~tomentosis~~ urceolo membranaceo inclusis. *Anderson in linn. trans.* 12. p. 252.

Pæonia Moutan. *Dryander in hort. kew. ed. 2. v. 3. p.* 315. *Sims in bot. mag. t.* 1154. *Smith in Rees's cyclop. in loco.* *Bonpl. nav. p. 1. t. 1. Decand. syst. 1. p.* 387. *prodr. 1. p.* 65.

P. suffruticosa. *Andr. bot. rep. t.* 373.

P. officinalis. *Thunb. fl. jap. p.* 230. (ex parte.)

ε. *punicea*, flore multiplici puniceo.

Stem woody at the base. *Branches* angular, glabrous, green, rather thicker than a writing quill. *Leaves* stalked, ternate ; leaflets broadly cuneate, 4 or 5 inches long, 3-lobed, the lobes again acutely 3-lobed, green and shining above, paler and glaucous beneath, with prominent ribs. *Footstalks* 3 inches long, stout, nearly cylindrical. *Bractes* lanceolate, acute, leafy, longer than the calyx. *Calyx* of 5 broadly ovate, pointed, concave, leathery segments, of a green colour, stained with purple. *Petals* carmine, concave, cut, crumpled and waved at the edges. *Filaments* numerous, subulate, red. *Anthers* linear, obtuse, yellow of two connate cells. *Ovaria* 5, ventricose, copiously downy, surrounded by the elevated, lobed, dark red, cupshaped disk.

Communicated in May last by Sir Abraham Hume, Bart., from his collection at Wormleybury. It is most probably a seedling from *Anneslei*, as it agrees with that variety in habit, and in the uniform rich colour of its petals.

The flowers, however, are larger than in that variety, with the petals more numerous, more deeply cut, and of the colour of carmine.

The plant requires the same culture and treatment as the other varieties from *papaveracea*.

The generic name is already explained at fol. 238. *D. Don*.



1. Diminished outline of a lower leaf.



VÌOLA cucullata.

Hollow-leaved Violet.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. VIOLARIEÆ. *Decand. prodr.* 1. p. 287.

VIOLA. *Suprà fol.* 126.

• *Staminibus approximatis, stylo basi attenuato, stigmatè triangulari rostrato, toro planiusculo, capsulâ trigonâ. Acaules, radice incrassatâ.*

V. cucullata, acaulis; foliis cordatis acutiusculis glabris crenatis basi cucullatis, petalis lateralibus barbatis; infimo glabro, stigmatè marginato.

Viola cucullata. *Soland. in hort. kew.* 3. p. 288. *ed.* 2. v. 2. p. 44. *Willd.*

sp. pl. 1. p. 1162. *Pursh fl. amer.* 1. p. 173. *Nutt. gen.* 1. p. 148.

Sims in bot. mag. 1795. *Ræm. et Schult.* 5. p. 355. *Elliott carol.* 1.

p. 298. *G. Don. gen. syst. gard. & bot.* 1. p. 321.

V. cordata. *Walt. carol.* p. 219.

Plant perennial, tufted, stemless. *Root* thick and fleshy, sending forth numerous white fibres. *Scapes* solitary, one-flowered, resembling the petioles, but shorter and slenderer, slightly angular, channelled on one side. *Leaves* cordate, rather acute, equally crenate, glabrous, or slightly pubescent, dark green above, rather paler beneath, wrinkled and veiny, about two inches long, cucullate at the base, with involute crenated lobes. *Footstalks* 5 or 6 inches long, almost filiform, channelled above, pale green, streaked and spotted with purple. *Sepals* ovate-oblong, rather blunt, 3 or 5-nerved, glabrous, shortly produced at the base, of a livid hue, with a narrow, membranous, white, ciliated border, the outer pair broader. *Petals* 5, broadly obovate, of a dark blue, with deeper coloured veins, the two lateral ones white and streaked at the base of the lamina, and furnished just above the claws with a copious white beard composed of erect, club-shaped hairs; lower one rather wedge-shaped,

blunt, entire, glabrous, the lower half white and streaked with dark blue veins, the claw wider, hollow, spurred behind, and finely pubescent within; claws short, white, and channelled, of a thicker consistence than the rest of the petals. *Spur* very short, saccate, blunt, ventricose, livid purple. *Stamens* 5, connate. *Filaments* very short, stout, compressed, glabrous, pale green. *Anthers* 5 times longer than the filaments, cream coloured, the crest oblong, obtuse, cucullate, membranous, orange, about as long as the anthers, the edges involute. *Ovarium* oblong-conical, glabrous. *Style* clavate, nearly as long as the ovarium. *Stigma* ascending, thick, triangular, marginate, the lower angle rather more prominent and terminating in a foramen.

This very pretty violet is common throughout a great portion of the United States of North America, delighting in wet places, and in a clayey soil. It was introduced to our gardens in 1772, and was first described by Solander in the *Hortus Kewensis*. It is a hardy perennial of very easy culture, being readily increased either by parting the roots or by seeds. Our drawing was taken at Mr. Knight's, King's Road, Chelsea, in May last.

The *V. papilionacea* of Pursh closely resembles this species, and indeed by Nuttall and several other American Botanists it is regarded as a mere variety of it, an opinion which, from an attentive examination of several authentic specimens, I am not disposed to adopt, as I find in them the lower petal constantly strongly bearded, and the margin of the stigma more prominent. There are some others, such as *obliqua* and *sororia* whose characters are less marked, and which may very possibly prove to be only varieties of the present.

See fol. 126, for the meaning of the generic name.

D. Don.



1. Lateral petal.

2. and 3. Anthers.

4. Pistil.



Asclepias tuberosa L. - Milkweed

ESCHSCHÓLZIA *crocea*.

Saffron-coloured Californian Poppy.

Linnean Class and Order. POLYANDRIA MONOGYNIA.

Natural Order. PAPAVERACEÆ. *Juss. gen. p.* 235.

ESCHSCHOLZIA. *Calyx* pedunculi apicis disciformi impositus, calyptriformis, e sepalis 2 connatis. *Petala* 4. *Stamina* indefinita, basibus petalorum adnata. *Antheræ* lineares, elongatæ, posticæ. *Stigmata* 4, filiformia; alternis multò minoribus, placentis oppositis. *Capsula* siliquiformis, 1-locularis, 2-valvis, polysperma: *valvulis* margine seminiferis. *Semina* obovata.

Herbæ (californicæ) *succo flavo scatentes, foliis triternatim multipartitis, floribus amplis speciosis aureis.*

E. crocea, caule ramoso folioso, foliorum segmentis linearibus, pedunculi cyathiformi: limbo maximo dilatato, calyce longe acuminato. *Bentham in hort. trans. v. l. n. s. p.* 406. *Lindl. in bot. reg. t.* 1677.

Stems procumbent, branched, cylindrical, a span long, pale green, marked with longitudinal white lines. *Leaves* alternate, stalked, finely triternately divided, glaucous, glabrous, with cuneately linear, pointed segments, the points red. *Flowers* solitary, axillary, or terminal. *Peduncles* cylindrical, furrowed, marked with white ribs, terminated by a funnel-shaped apex, having a broad, orbicular, crenately lobed, spreading, fleshy, slightly plaited border, which is at first of a green colour, but afterwards changing to pale purple. *Calyx* about an inch long, fusiform, blunt, striated. *Petals* broadly cuneate, nerved, repandly crenate, and slightly waved at the outer edge, an inch and a half long, of a brilliant orange above, paler beneath, glossy on both sides. *Stamens* about 25, unequal, attached to the base of the petals. *Filaments* compressed, glabrous, shining, the upper half of a dark purple. *Anthers* adnate, double

the length of the filaments, linear, slightly mucronulate, the cells parallel, connate, opening outwardly lengthways, attached to a convex semicylindrical connectivum. *Ovarium* conical, oblong, fluted, glaucous, one-celled, closely surrounded at the base by the inner elevated crenated white edge of the disk. *Stigma* divided to the base into four long, awlshaped, slightly twisted, minutely papillose segments, the pair right and left are nearly double the size of the other two. *Placentæ* 2, perpendicular to the smaller stigmas. *Ovules* crowded, obovate.

Our gardens are indebted to the indefatigable zeal of our lamented friend, Mr. Douglas, for many of their most brilliant ornaments, amongst which must be reckoned the present splendid new species of *Eschscholzia*, which was introduced in 1833 from seeds transmitted by him to the Horticultural Society. It is very nearly related to *E. californica*, and is chiefly distinguished, as Mr. Bentham well observes, by the widely expanded apex of the peduncle, and by the longer point of the calyx. The flowers are of a rich orange, and certainly not inferior in beauty to *californica*. It is like that species a hardy biennial, and its culture and propagation are the same. Our drawing was taken at the Nursery of Messieurs Allen and Rogers at Battersea.

The genus was named by Chamisso after his fellow traveller, Dr. Frederick Elsholtz, or as the Russians write it Eschscholz (an orthography which he afterwards adopted himself), who accompanied Kotzebue in the Russian voyage of discovery, in the capacity of Physician and Naturalist. He was afterwards appointed Professor of Zoology, in the University of Dorpat. *D. Don.*



1. Petal with the stamens attached.
2. Pistil with the floral disk, and a portion of the peduncle.



CRATÆGUS mexicana.

Mexican Hawthorn.

Linnean Class and Order. ICOSANDRIA DIGYNIA.

Natural Order. POMACEÆ. *Rich. anal. fr. p. 33. Lindl. in linn. trans. 13. p. 93.*

CRATÆGUS. *Calyx* 5-dentatus. *Petala* patentia, orbiculata. *Ovarium*, 2-5-loculare. *Styli* glabri. *Pomum* carnosum, oblongum, dentibus calycinis v. disco clausum, putamine osseo.

Frutices (Americæ septentrionalis, Europæ, Asiæ et Africæ borealis) *spinosi*. *Folia* angulata v. dentata, nunc sempervirentia. *Cymæ* terminales, plerumque multifloræ, patentes. *Bractes* subulatæ, deciduæ. *Lindl. in l. c. 13. p. 105.*

C. mexicana, digyna, inermis; foliis cuneato-oblongis duplicato-serratis subtus villosis, corymbis multifloris hirsutis, dentibus calycinis lanceolatis acutis integerrimis recurvatis, pomis globosis punctatis 5-spermis.

This forms a small unarmed bushy tree of 8 or 10 feet high, and is apparently evergreen, with round, glabrous, olive-coloured branches. *Leaves* stalked, oblong, or cuneately lanceolate, pointed, the upper third unequally and often doubly serrated, with rather blunt teeth, the rest of the margin quite entire and even, attenuated at the base, 2 or 3 inches long, and about an inch in breadth; upper surface light green, veiny and wrinkled, finally becoming glabrous, underneath copiously clothed, especially in the younger ones, with soft, adpressed white hairs. *Footstalks* very short, channelled above, and bordered with a narrow leafy margin. *Stipules* stalked, lunate, acuminate, serrated with unequal glandular teeth. *Corymbs* terminal, many-flowered. *Peduncles* cylindrical, copiously hairy. *Bractes* linear, acute, adpressed, furnished at the margin with numerous, minute, glandular teeth. *Calyx* turbinate, densely

hairy, the teeth lanceolate, acute, keeled, entire, recurved, afterwards becoming erect and connivent, fringed with minute glands. *Petals* scarcely longer than the calycine teeth, nearly orbicular, concave, crumpled, pure white, veiny, rather narrowed at the base. *Stamens* varying from 10 to 15, arranged in a double series, inserted into the margin of the red, concave, lobed, plaited, fleshy disk. *Filaments* awl-shaped, glabrous, white, dilated at the base. *Anthers* pale pink, peltate, composed of two parallel connate cells. *Styles* 2, or rarely 4, nearly filiform, slightly compressed, shorter than the stamens, pale yellow, marked with a shallow line on their inner surface. *Stigma* yellow, peltate, viscid. *Ovarium* 5-celled, with solitary ovules. *Pome* about the size of the common Medlar, globose, slightly attenuated at the base, glabrous, green, afterwards when ripe changing to pale yellow, dotted exteriorly with brown dots, enclosing 3 or 5, very thick, hard and bony nuts, having a deep furrow behind; flesh copious, pale green, firm, and of a disagreeable bitter taste, with the bundles of vessels very conspicuous, green, imbedded in it.

This new and very distinct species of Hawthorn will form a valuable addition to our hardy shrubs, producing an abundance of white blossoms, which are succeeded by fruit of unusual size, and of the colour of the golden pippin apple.

It is a native of the table lands of Mexico, whence it was introduced from seeds received by Mr. Lambert in 1829. The tree flowered for the first time in the garden at Boyton House, Wilts, in the summer of last year, and ripened its fruit in the following November.

It is found to be quite hardy, and it may be increased by budding on stocks of the common Hawthorn.

The generic name is derived from *κρατος*, strength, and alludes to the extreme hardness of the wood of some species of the genus. *D. Don.*



1. Section of the fruit.

2. Transverse section of a nut.



